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**PROJECT MEMORANDUM
SCE EL CASCO SYSTEM PROJECT**

To: Lynne Mosley, CPUC
From: Vida Strong, Aspen Project Manager
Date: December 23, 2009
Subject: Report 18: December 13, 2009 – December 19, 2009

CPUC ENVIRONMENTAL MONITORS (EM): Lynn Stafford, Justin Wood

CPUC EM Lynn Stafford was on site December 15th, 16th, and 17th, 2009. CPUC EM Justin Wood was on site December 16th, 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 23rd, 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 Tuesday through Saturday. Muddy ground conditions from weekend rain prevented work on Monday.

Rough grading of the new access road has been 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. The new access road is now being used as the main access road.

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, lined with water resistant



fabric and an underlying gravel blanket, and is being filled with firm material. A second over-excavation area further eastward continued to be excavated during the subject week (see Figure 1).

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 (see Figure 2). 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.

The lowest and last of the four terrace tension cable anchor systems on the eastern ridge was nearing completion during the subject week. The upper five terrace systems on the higher western ridge have been completed. The contractor has temporarily skipped the sixth terrace location and worked on the seventh terrace during the subject week (see Figure 3).

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.

Grading and civil work continued within the northern section of the substation during the subject reporting week as permitted by weather and wet ground conditions. 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. PAR Electrical Contractors, Inc. has been selected for the installation of new electrical equipment.

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 was issued on December 2, 2009. The report on the pre-construction clearance biological resources survey was prepared on November 30, 2009, and submitted to the CPUC EM on December 2, 2009. The report was field validated by the CPUC EM on December 3, 2009.

Construction began during the prior week. Environmental training of the crew, implementation of Storm Water Pollution Prevention Plan procedures, installation of shaker plates, and beginning of excavation of the eastern berm for expansion of the substation have occurred so far (see Figure 4).

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.

The report for the pre-construction clearance biological survey for the Yucaipa to El Casco segment of the FOC route was prepared by NRC and given to the CPUC EMs on Wednesday of the subject week. The field validation also was completed by the CPUC EMs on Wednesday of the subject week.

During the subject week, one SCE FOC crew continued work on the main FOC Route within the Zanja to Yucaipa segment installing support arms, hardware, and rope overhead, pulling cable and attaching cable at various locations on Juniper Avenue, Bryant Street, Douglas Avenue, Date Avenue, Avenue E, and Third Avenue. A second crew worked on the Banning to Maraschino segments on Saturday of the subject week. They installed support arms and hardware to Lincoln Avenue in Banning starting at the Banning Substation working westward. Each crew was accompanied by a biological monitor.

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. SCE requested to begin construction of Segment 3 (the 115 kV alignment has been divided into seven segments) while pending submittals and analysis for the other segments are being processed. Segment 3 is a one to one pole replacement. Pre-construction submittals for segment 3 have been approved and the approval of the NTP is pending.

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 to eliminate several geotechnical and hydrological mitigation measure requirements related to the 115 kV Subtransmission Line Element. Variance #5 was partially approved by CPUC on October 23. Variance #5 lessened some requirements depending on topography and site resources. In addition, the approval discussed that SCE now proposes the installation of a large numbers of new poles that were not anticipated in the original EIR and the need for further analysis by CPUC. The 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. This information is under review by CPUC.

On December 9, 2009, a pre-NTP Biological Resource Survey Report was submitted by NRC to SCE for Segment 3 of the proposed Subtransmission Cable Route. This segment is within Sun Lakes Development in Banning between Highland Springs Road and Highland Home Road. This report was field validated by the CPUC EM on Thursday of the subject week.

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. Monitors representing pertinent environmental issues were present with each construction crew at all times during construction. No environmental monitor was continually 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 not an issue during the subject week because of earlier inclement weather and subsequent wet ground conditions.
- 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 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 November 2, an accident occurred between a Project scraper operated by CatTrac, the El Casco Substation contractor, and a private vehicle. The CPUC requested the police report and the contractor's report from SCE. SCE provided the police Incident Report on December 14.
- During the subject week, several new significant fossils were located, recovered, and processed at the El Casco Substation site. These consisted of plant leaves, mammal bones (possibly deer), and snail shells. The fossils recovered to date have been found during excavation in one of the over-excavation pits at the toe of the eastern ridge and in some of the hillside terraces. The fossils are within the San Timoteo Formation and thought to be between 0.9 and 6.1 million years old. 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." All excavation activity, especially in the areas containing the San Timoteo Formation, was continually monitored by paleontologists. 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. 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. All parties, including the monitors, SCE staff, and the contractor have worked together to facilitate the recovery of fossils, and to minimize construction delay. CPUC/Aspen personnel have been kept informed of events as they happened. 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.
- A rain event occurred during the weekend prior to the subject week. At El Casco Substation site, construction work did not occur on Monday of the subject week because of muddy ground conditions. Erosion and siltation prevention controls continued to be adequate during the subject week. These controls included silt fencing, sandbagging, and straw wattling. In addition, the newly constructed access road and over-excavation areas served to retain run off water. No significant run off water or silt reached San Timoteo Creek from the substation construction site. Storm-related issues did not occur at any other Project work site.
- On December 9, 2009, a pre-construction clearance Biological Resource Survey Report was submitted by NRC to SCE for Segment 3 of the proposed Subtransmission Cable Route. This segment is within Sun Lakes Development in Banning between Highland Springs Road and Highland Home Road. The report contains text, an aerial map showing locations of sensitive biological resources with unique identifier numbers (UIN), a chart with detailed descriptions of the UINs, and several photographs of the segment. The report concludes that sensitive resources are present in the vicinity of Segment 3. Impacts to these resources can be minimized or avoided through the implementation of mitigation measures described in the El Casco System Project EIR, and the MMCRP, and by continuing to be consistent with the WRMSHCP. The chart describes individual recommendations for additional surveys, flagging, avoidance and monitoring for each identified resource. The report was field validated by CPUC EM, Lynn Stafford, on Thursday of the subject week.
- The report for the pre-construction clearance biological survey for the Yucaipa to El Casco segment of the FOC route was prepared by NRC on December 15, 2009 and given to the CPUC EMs on December 16, 2009. The report contains text, six aerial maps showing locations of sensitive biological resources with unique identifier numbers (UIN), and a chart with detailed descriptions of the UINs. The report describes surveys done by NRC biologists on December 2, 3, 8, and 9, 2009. The report determines that conditions have not changed since the pre-NTP survey in May and July, 2009. The report concludes that sensitive resources are present in the vicinity of this segment. Impacts to these resources can be minimized or avoided through the implementation of mitigation measures described in the El Casco System Project EIR, and the MMCRP, and by continuing to be consistent with the WRMSHCP. The chart describes individual recommendations for additional surveys, flagging, avoidance and monitor-

ing for each identified resource. The field validation was completed by CPUC EMs Lynn Stafford and Justin Wood, on December 16, 2009. The Yucaipa to El Casco segment of the FOC is more than fourteen miles long and is expected to take at least four months to complete

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 MEMORANDA, AND OTHER INCIDENTS
(Updated 12-23-09)

Type	Date Issued	Description
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 12-23-09)

NTP #	Date Requested	Date Issued	Description
#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.
#6	06/19/09	12-02-09	Zanja Substation
#7	12/17/09	Under review	Segment 3 of 115 kV subtrans element.
	03/03/09	Under Review ¹	115 kV Sub-transmission lines replacement.
	06/19/09	Under Review ¹	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 12-23-09)**

Variance #	Date Requested	Date Issued	Description
#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 watertanks 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 12-23-09)**

TEWS #	Date Requested	Date Issued	Description
#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 PHOTOGRAPHS



Figure 1: The westernmost over-excavated area (in the mid-distance to the left of the blue tank) has been over-excavated, lined with water resistant fabric and an underlying gravel blanket, and is being filled with firm material. A second over-excavation area further eastward (in front of the orange fencing) continued to be excavated during the subject week. The photograph was taken from one of the upper terraces and faces northward



Figure 2: A tie-back wailer structure was under construction on the face of one of the terraces. The ends of the approximately 120-foot-long cable anchor can be seen emerging from the oblique bores dug into the hill. After completion of the wailer, the cables will be placed under tension.



Figure 3: The upper five terrace systems on the higher western ridge have been completed. The contractor has temporarily skipped the sixth terrace location (middle empty bench) and worked on the seventh terrace (with the drill rig on the right) during the subject week. The photograph faces southward.



Figure 4: Construction at the Zanja Substation began during the prior week. Construction will consist of paving the access road, expansion of the substation perimeter fence (behind the orange fencing), placement of additional electrical equipment, and construction of a tower. Note the shaker plate, gravel bed, and erosion control straw wattles on the access road. The photograph faces westward.