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PROJECT MEMORANDUM

PG&E EMBARCADERO-POTRERO 230 kV TRANSMISSION PROJECT

To: Billie Blanchard, Project Manager, CPUC
From: Vida Strong, Aspen Project Manager
Date: March 17, 2016
Subject: Monitoring Report #77 – March 7, 2016 to March 13, 2016

This report provides a summary of the construction and compliance activities associated with the PG&E Embarcadero-Potrero (E-P) 230 kV Transmission Project.

A summary of the Notices to Proceed (NTPs) for construction and Minor Project Change (MPC) activities are provided in Tables 1 and 2, respectively (below).

CPUC Environmental Monitor (EM): Jody Fessler was on site March 9th.

CPUC NTPs

E-P Potrero Switchyard Site Preparation

NTP #1 was issued on August 21, 2014 for the site preparation of the Potrero Switchyard on 23rd Street adjacent to the existing Potrero Substation on the corner of 23rd Street and Illinois Street in San Francisco. NTP #1 included conditions that had to be satisfied prior to the start of construction.

Summary of Activity:

1. Site preparation activities have been completed and all work is now being conducted for the GIS building and cable tie-in work approved by the CPUC under NTP #5 (see below).

Environmental Compliance:

1. All environmental compliance monitoring will be reported below for the GIS building and cable tie-in work.

E-P Horizontal Directional Drill (HDD) Construction

NTP #2 was issued on August 28, 2014 for the HDD Construction on Spear Street, at the northern end of the project, and 23rd Street, at the southern end of the project, in San Francisco. Both HDDs would terminate within the San Francisco Bay and will be tied together in the future via a subsea cable. NTP #2 included conditions that had to be satisfied prior to the start of construction, as well as prior to the start of any work in the Bay.

Summary of Activity at the Northern Bore (Spear Street):

1. The HDD work is complete and HDD Company demobilized from the site during Week #26.

Summary of Activity at the Southern Bore (23rd Street):

1. The HDD work is complete and HDD Company demobilized from the site during Week #26.

E-P Underground Duct Bank Construction

NTP #3 was issued on October 9, 2014 for the underground duct bank and vault installation component of the Embarcadero-Potrero 230 kV Transmission Project between the horizontal directional drill (HDD) transition on Spear Street to the Embarcadero Substation on Folsom Street in the northern section, and between the HDD transition on 23rd Street to the Potrero Switchyard in the southern section, in the City of San Francisco. NTP #3 included conditions that had to be satisfied prior to the start of construction.

Summary of Activity for the Duct Bank North (Folsom St. and Spear St.):

Folsom Street

1. All work activities have been completed at this location.

Spear Street, Duct Bank and Vault (between Folsom St and Harrison St)

1. All work activities have been completed at this location except the pulling of conductor cable, which is scheduled to start in mid-April 2016.

Environmental Compliance:

1. No compliance monitoring was necessary at this location.

Summary of Activity for the Duct Bank South (23rd Street):

23rd Street, Duct Bank and Vault

1. All work activities have been completed at this location except the pulling of conductor cable, which is scheduled to start in mid-April 2016.

Environmental Compliance:

1. No compliance monitoring was necessary at this location.

E-P Submarine Rock and Debris Removal

NTP #4 was issued on November 21, 2014 for the rock removal obstructing the path of the submarine cable component of the Embarcadero-Potrero 230 kV Transmission Project along the submarine cable line and off shore of Pier 50 in the San Francisco Bay. NTP #4 included conditions that had to be satisfied prior to the start of construction.

Summary of Activity:

1. All work activities related to NTP #4 have been completed.

Environmental Compliance:

1. No compliance monitoring was necessary at this location.

E-P Potrero GIS Building and Cable Tie-in

NTP #5 was issued on March 27, 2015 for construction of the 230 kV Potrero gas-insulated switchgear (GIS) building and cable tie-in component of the Embarcadero-Potrero 230 kV Transmission Project at the Potrero Switchyard site, in the City San Francisco. NTP #5 included conditions that had to be satisfied prior to the start of construction.

Summary of Activity:

Potrero Switchyard

1. Office trailer use occurred Monday through Sunday.
2. Overaa conducted housekeeping and dust control activities Monday through Sunday.
3. Overaa aided other work crews Monday through Sunday.
4. Overaa adjusted concrete curing blankets in the GIS building on Monday.
5. Overaa removed concrete curing blankets in the GIS building on Tuesday and Wednesday.
6. Metal Set welded in the GIS building Monday through Friday (see Figure 1).
7. APEC excavated and installed cable trays for the cable trench Monday through Thursday.
8. APEC excavated and installed shoring, rebar, and conduit for the duct bank near the transformer pad Tuesday through Sunday (see Figure 2).
9. MEI conducted embed work in the GIS building on Wednesday.
10. CTS provided inspections of the GIS building Monday through Friday.
11. NASS and TBEA assembled the reactor (dress and test) Tuesday through Friday (see Figure 3).
12. NASS and TBEA assembled the transformer Wednesday through Friday (see Figure 4).
13. Proven distributed baserock Monday through Friday.
14. CCE conducted electrical work in the control building Monday through Saturday.
15. Clean Harbors replaced roll-off bins Monday through Friday.
16. At the time of the CPUC EM site visit on March 9th, crews were working in the GIS building, excavating trench for conduit installation, assembling the reactor and transformer, spreading baserock throughout the site, and conducting electrical work in the control building.

Substation Adjacent to Potrero Switchyard

1. CCE QEW monitored work in the substation Monday through Saturday.
2. APEC conducted housekeeping and dust control activities Monday through Sunday.
3. APEC excavated in the substation Monday through Thursday.
4. CCE installed new substation infrastructure on Monday through Sunday.
5. At the time of the CPUC EM site visit on March 9th, crews were excavating in the substation and installing new infrastructure.

Environmental Compliance:

1. Cultural monitoring was conducted by Far Western Monday through Friday, and cultural constituents were observed, documented, and some collected.
2. Air quality monitoring was conducted by ERM Monday through Friday.
3. PG&E's Environmental Inspector conducted monitoring of this area Monday through Friday, including SWPPP inspections and nesting bird sweeps.
 - On March 8th, the PG&E Environmental Inspector observed a pair of active rock doves rebuilding a nest on the high metal beams in the southeast corner of the GIS building. Rock doves are exempt from the Migratory Bird Treaty Act and the nest was removed by Overaa per PG&E's request for health and safety issues. The nest had one egg present.

4. PG&E's Environmental Inspector (EI) noted several housekeeping and compliance issues at this location:
 - On March 4th, buckets of sealant were left out overnight with no secondary containment. The PG&E EI recommended secondary containment and covering them during rain. On March 7th, it was observed that the buckets had been removed.
 - On March 4th, a trash can near the GIS building had a hole through it, approximately 2 inches in diameter. On March 7th, it was observed that the can had been removed.
 - On March 4th, the NASS crane was leaking oil and secondary containment had already been placed underneath; no oil was observed on the ground. On March 9th, it was observed that the issue was rectified; the vehicle was removed from the project area.
 - On March 8th, two lighting structures were observed without containment in the northeast corner of the switchyard. On March 10th, it was observed that the structures had been removed from the project site.
 - On March 11th, a porta-potty in the substation was not anchored down. The PG&E EI recommended that the unit should be anchored to avoid being tipped over.
5. The CPUC EM noted that the site was neat and clean, despite the rain and it being very muddy (see Figure 5), and that SWPPP measures were in place. All observed work activities were in compliance with the mitigation measures (MMs), Applicant Proposed Measures (APMs), and other permit requirements.

E-P Submarine Cable Installation

NTP #6 was issued on April 7, 2015 for the submarine cable installation component of the Embarcadero-Potrero 230 kV Transmission Project in the San Francisco Bay. NTP #6 included conditions that had to be satisfied prior to the start of construction.

Summary of Activity:

1. All work activities for the submarine cable installation were completed during Week #50.

Amador Staging and Laydown Yard

A Minor Project Change #1 was issued on July 23, 2014 for the use of the Amador Staging and Laydown Yard on Amador Street, San Francisco. The Minor Project Change #1 included conditions that had to be satisfied prior to the staging of equipment and materials at the yard.

Summary of Activity:

1. All remaining materials were removed on December 7th and the yard has been turned back over to the Port of San Francisco.

Environmental Compliance:

1. No compliance monitoring was necessary at this location.

Notices to Proceed

Table 1 summarizes the Notices to Proceed (NTP) for the Embarcadero-Potrero Project.

Table 1
Notice to Proceeds (NTPs)
 (Updated 3/17/16)

| NTP # | Date Requested | Date Issued | Phase | Description |
|--------------|-----------------------|--------------------|----------------------------------|---|
| NTP #1 | 6/23/14 | 8/21/14 | Potrero Site Preparation | Site preparation and excavation of the 230 kV Potrero Switchyard site on 23 rd St., SF. |
| NTP #2 | 7/31/14 | 8/28/14 | HDD | Horizontal directional drilling on Spear St. and 23 rd St. connecting to the SF Bay. |
| NTP #3 | 9/18/14 | 10/09/14 | Underground Duct Bank and Vaults | Underground duct bank and vault installation between the HDD transition on Spear St. to the Embarcadero Substation on Folsom St. in the northern section, and between the HDD transition on 23 rd St. to the Potrero Switchyard in the southern section, SF. |
| NTP #3 MOD | 11/13/14 | 11/14/14 | Underground Duct Bank and Vaults | Trench from the new Potrero Switchyard to the existing switchyard for the 230 kV/115 kV connections across the Trans Bay Cable. |
| NTP #4 | 11/19/14 | 11/21/14 | Subsea Cable | Rock and debris removal along subsea cable route. |
| NTP #5 | 2/19/15 | 3/27/15 | Potrero GIS Switchgear Building | Construction of 230 kV Potrero gas-insulated switchgear (GIS) building and cable tie-in component at Potrero Switchyard. |

Minor Project Changes

Table 2 summarizes the Minor Project Changes submitted for the Embarcadero-Potrero Project.

Table 2
Minor Project Changes (MPCs)
 (Updated 3/17/16)

| MPC # | Date Requested | Date Issued | Phase | Description |
|--------------|-----------------------|--------------------|---------------------------------|--|
| MPC #1 | 7/16/14 | 7/23/14 | Amador Staging and Laydown Yard | Use of an existing staging and laydown yard adjacent to Alternate Staging Area #3 (as identified in the IS/MND) on Amador St., SF. |
| MPC #2 | 12/31/14 | 1/5/15 | Staging and Laydown Yard | Use of an existing paved staging and laydown yard at 1215 Michigan Street, SF, two blocks from the Potrero Switchyard. |

PROJECT PHOTOS



Figure 1 – Crews working in the GIS building. View east, March 9, 2016.



Figure 2 – Crews installing conduit in the trench line near the transformer. View east, March 9, 2016.



Figure 3 – Crews assembling the reactor. View north, March 9, 2016.



Figure 4 – Crews assembling the transformer. View southeast, March 9, 2016.



Figure 5 – Conditions at the switchyard site were very muddy during the subject reporting period given the recent rains. Photo courtesy of PG&E.