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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: August 19, 2015
Subject: Monitoring Report #48 – August 10 to August 16, 2015

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 August 13th and 14th.

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, Duct Bank (day work)

1. Underground Construction Co. saw cut and removed pavement between Main and Spear Streets on Wednesday.
2. Underground Construction Co. excavated the duct bank trench between Main and Spear Streets Wednesday through Saturday.
3. Underground Construction Co. installed shoring in the duct bank trench between Main and Spear Streets on Thursday and Saturday.
4. Underground Construction Co. potholed for utilities between Fremont and Beale Streets on Friday.
5. Underground Construction Co. jackhammered pavement between Fremont and Beale Streets on Friday and Saturday.
6. Underground Construction excavated the duct bank trench between Fremont and Beale Streets on Saturday.
7. Underground Construction Co. installed a settlement monitor/well between Fremont and Beale Streets on Saturday.
8. Underground Construction Co. potholed for utilities between Beale and Main Streets on Friday and Saturday.
9. Underground Construction Co. installed shoring between Beale and Main Streets on Friday and Saturday.
10. Underground Construction Co. excavated the duct bank trench between Beale and Main Streets on Saturday.
11. Underground Construction Co. removed shoring between Beale and Main Streets on Saturday.
12. Clean Harbors hauled off excavated materials Wednesday through Saturday.
13. At the time of the CPUC site visit on August 14th, a crew was jackhammering pavement and potholing for utilities near the intersection of Folsom and Fremont Streets (see Figure 1), another crew was installing shoring and potholing for utilities between Beale and Main Street (see Figure 2), and another crew was excavating the duct bank trench between Main and Spear Streets.
14. Street sweeping occurred Monday through Saturday.
15. No construction activities occurred on Sunday.

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

1. Underground Construction Co. excavated the duct bank trench Monday through Thursday.
2. Underground Construction Co. dewatered the duct bank trench Monday through Saturday.
3. Underground Construction Co. installed shoring in the duct bank trench on Monday.
4. Underground Construction Co. installed rebar on Monday, Wednesday, Friday, and Saturday.
5. Underground Construction Co. installed conduit in the trench on Monday, Friday and Saturday.
6. Underground Construction Co. backfilled with gravel on Wednesday and Thursday.

7. Clean Harbors hauled off excavated materials Monday through Thursday.
8. Street sweeping occurred Monday through Saturday.
9. At the time of the CPUC EM site visit on August 14th, crews were installing rebar and conduit in the trench (see Figure 3).
10. No construction activities occurred on Sunday.

Spear Street, Vault

1. Underground Construction Co. dewatered the transition vault on Monday.
2. Underground Construction Co. grouted and waterproofed the transition vault Monday through Wednesday.
3. Underground Construction Co. paved on Tuesday.
4. Underground Construction Co. conducted housekeeping activities on Tuesday.

Environmental Compliance:

1. Cultural monitoring was conducted by Far Western Monday through Saturday. August 10th through 15th, cultural constituents were observed, documented, and some collected.
2. PG&E's Environmental Inspector conducted monitoring of the work area and activities on Monday through Saturday, including SWPPP inspections.
3. Nesting bird sweeps were conducted Monday through Saturday.
4. PG&E's Environmental Inspectors noted no compliance issues at this location.
5. The CPUC EM noted that the site was neat and clean 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.

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

23rd Street, Duct Bank

1. Underground Construction Co. excavated the duct bank trench Monday through Friday.
2. Underground Construction Co. dewatered the trench Monday through Thursday.
3. Underground Construction Co. potholed and repaired a broken water line on Thursday.
4. Street sweeping was conducted Monday through Friday.
5. At the time of the CPUC EM site visit on August 13th and 14th, crews excavated the duct bank trench around the Station A feature on 23rd Street (see Figure 4).
6. No construction activities occurred on Saturday or Sunday.

23rd Street, Vault

1. Underground Construction Co. primed the transition vault on Monday.
2. Underground Construction Co. poured concrete on top of the transition vault on Wednesday.
3. Underground Construction Co. grouted in the transition vault on Thursday.
4. At the time of the CPUC EM site visit on August 13th, a crew was working inside of the transition vault.

23rd Street, Water Line Relocation

1. Underground Construction excavated for the water line relocation and installed a valve box on Monday.
2. Underground Construction Co. installed a valve encasement for the water line relocation on Tuesday.
3. Underground Construction Co. laid road base for the water line relocation on Tuesday.

Environmental Compliance:

1. Cultural monitoring was conducted by Far Western Monday through Friday. August 10th through 14th, 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 the work area and activities on Monday through Friday, including SWPPP inspections.
4. Nesting bird sweeps were conducted Monday through Friday.
5. PG&E's Environmental Inspectors noted no compliance issues at this location.
6. The CPUC EM noted that the site was neat and clean 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 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 conducted.

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:

1. Overaa constructed and installed embeds Monday through Friday.
2. Overaa cut thread and rebar on Monday and set and tied eyebolts on Tuesday.
3. Overaa placed equipment pads on Thursday and cleaned the mat floor on Friday.
4. Overaa wetted the concrete slab blankets on Sunday.
5. Overaa conducted housekeeping and dust control Monday through Sunday.
6. MEI installed embeds Monday through Wednesday, and Friday.

7. MEI covered and tied up ground tails on Tuesday and Wednesday.
8. MEI placed couplings for waterproofing on Wednesday.
9. MEI pulled up ground stub tails and raised embeds in equipment pads on Thursday.
10. MEI pulled up columns on Friday.
11. MEI attached plastic covers on stubs on Friday.
12. CMC Rebar installed rebar on Tuesday and Wednesday.
13. CMC Rebar tied rebar on Tuesday and Wednesday.
14. CMC Rebar placed t-heads Tuesday through Thursday.
15. CMC Rebar placed equipment pads on Thursday and Friday.
16. CMC Rebar conducted housekeeping on Friday.
17. Landavazo poured concrete for the foundation slab and laid concrete slab blankets on Saturday.
18. Landavazo conducted housekeeping activities on Saturday.
19. PSC delivered water for filtration and disposal Tuesday and Wednesday.
20. PSC off hauled concrete contaminated with lead paint for proper disposal on Wednesday.
21. Office trailer use occurred Monday through Sunday.
22. At the time of the CPUC EM site visit on August 14th, crews were completing embeds, conducting housekeeping activities, and preparing for the concrete pour on Saturday (see Figure 5).

Environmental Compliance:

1. Air quality monitoring was conducted by ERM Monday through Sunday.
2. PG&E's Environmental Inspector conducted monitoring of this area Monday through Saturday, including SWPPP inspections.
3. Nesting bird sweeps were conducted Monday through Saturday.
4. PG&E's Environmental Inspectors noted no compliance issues at this location.
5. The CPUC EM noted that the site was neat and clean 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. Durocher installed concrete mats on Monday and Tuesday.
2. Durocher adjusted previously installed mats on Wednesday.
3. Durocher demobilized equipment on Thursday and Friday.
4. Durocher removed the diver jet pump fish screen on Thursday.
5. No work activities occurred on Saturday and Sunday.

Environmental Compliance:

1. Fisheries Biologist, Rob Aramayo, inspected the diver pump intake fish screen for fish on Thursday. No fish were observed.
2. PG&E’s Environmental Inspectors noted no compliance issues regarding this work.

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. Office trailer use occurred Monday through Saturday at the yard.
2. Tailboard meetings occurred at the yard Monday through Saturday.
3. Equipment and materials were stored at the yard throughout the week.
4. At the time of the CPUC EM site visit on August 13th, equipment and materials were being stored at the yard and the office trailers were in use.
5. No work occurred at the yard on Sunday.

Environmental Compliance:

1. PG&E’s Environmental Inspector conducted monitoring of the work area and activities Monday through Saturday, including SWPPP inspections.
2. Nesting bird sweeps were conducted Monday through Saturday.
3. PG&E’s Environmental Inspectors noted one compliance issues at this location. On August 14th, a parked Hertz water truck leaked approximately 4 Tbsp. of oil onto secondary containment. The PG&E Environmental Inspector recommended cleaning the oil from the visqueen of the secondary containment, and replacing or servicing the vehicle.
4. The CPUC EM noted that the site was neat and clean 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.

Notices to Proceed

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

Table 1
Notice to Proceeds (NTPs)
(Updated 08/18/15)

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 #	Date Requested	Date Issued	Phase	Description
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 230kV/115kV 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 08/18/15)

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 – Jackhammering on Folsom Street near Fremont Street. View northwest, August 14, 2015.

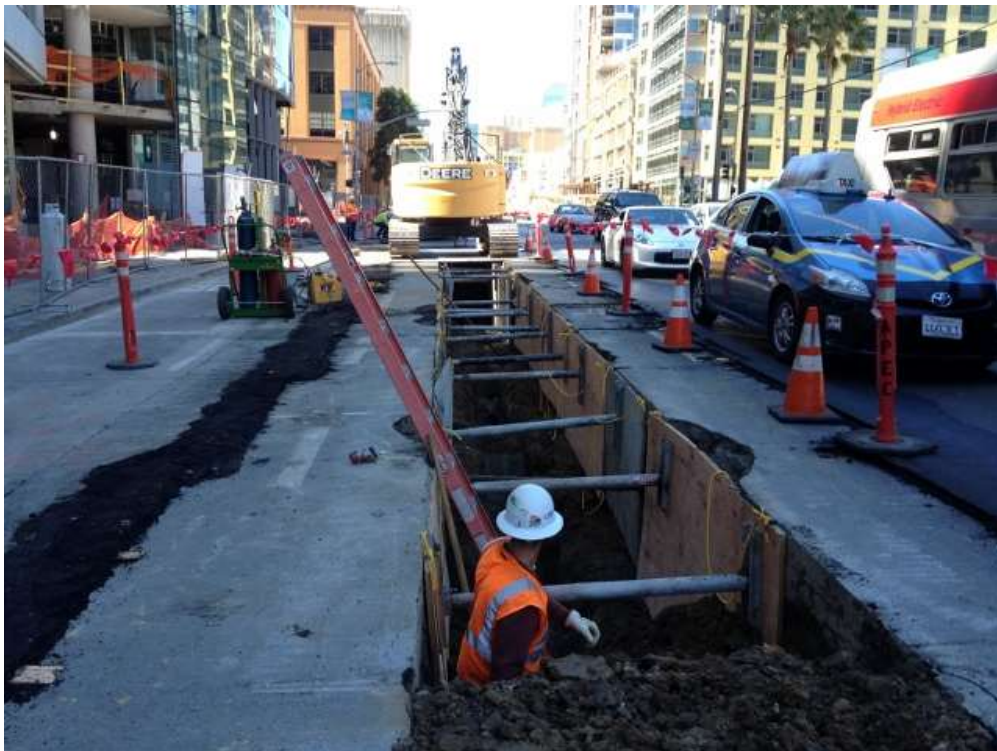


Figure 2 – Installing shoring and potholing between Beale and Main Streets on Folsom Street. View south, August 14, 2015.



Figure 3 – Installing rebar and conduit in trench on Spear Street near Folsom Street. View west, August 14, 2015.



Figure 4 – Excavating the duct bank trench on 23rd Street and working around the Station A feature. View east, August 14, 2015.



Figure 5 – Potrero Switchyard embeds installation. View southeast, August 14, 2015.