

PACIFIC GAS AND ELECTRIC COMPANY
Embarcadero-Potrero 230 kV Transmission Project
NTP # 1 Potrero Site Preparation Submittal

APM or MM addressed:	APM AQ-3. Minimize Potential Naturally Occurring Asbestos (NOA) Emissions
Attachments:	None: Asbestos Dust Mitigation Plan and BAAQMD approval are included in this document
Date Submitted:	July 5 2014

APM AQ-2. *Minimize Potential Naturally Occurring Asbestos (NOA) Emissions.* *The following measures will be implemented prior to construction:*

- *Prior to commencement of construction, samples of the Potrero Switchyard construction area will be analyzed for presence of asbestos, serpentinite or ultramafic rock*
- *For disturbed areas of greater than 1.0 acre, submit an Asbestos Dust Mitigation Plan to the BAAQMD and obtain approval prior to commencement of construction.*

PG&E response:

PG&E has prepared an Asbestos Dust Mitigation Plan, included in this document which has been approved by the BAAQMD. That approval has also been included in this document.

**Pacific Gas & Electric
Company**

**P.O. Box 7640
San Francisco, CA
94120**

June 2014

Prepared by:



Office Locations:
Los Angeles, Orange County, Riverside,
Ventura, Fresno, Oakland, Bakersfield

Tel: (949) 248-8490
Fax: (949) 248-8499

**Asbestos Dust Mitigation Plan
Embarcadero-Potrero 230 kV Project:
Potrero Switchyard Site**

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for
Embarcadero-Potrero
230 kV Project:
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Prepared for:

**Pacific Gas & Electric Company
P.O. Box 7640
San Francisco, CA 94120**

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Asbestos Dust Mitigation Plan for the Embarcadero-Potrero 230 kV Project: Potrero Switchyard Site

1.0 INTRODUCTION

This Asbestos Dust Mitigation Plan (ADMP) has been prepared for Pacific Gas and Electric (PG&E) pursuant to Title 17 of the California Code of Regulations (CCR) Section 93105, *Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations* (Asbestos ATCM). This plan has been prepared in anticipation of the site preparation work associated with the planned Embarcadero-Potrero 230 kV Transmission Project work at the new Potrero Switchyard site. The existing Potrero Switchyard is located on PG&E property east of Illinois Street, between 23rd Street and Humboldt Street, in San Francisco and is slated to be expanded with a new 230 kV switchyard located on a portion of the former Potrero Power Plant property (currently owned by NRG). The California Public Utilities Commission (CPUC) approved the Final Mitigated Negative Declaration (MND) for the Embarcadero-Potrero 230 kV Transmission Project and approved the project in a decision ([D.14-01-07](#)) issued on January 16, 2014.

PG&E has conducted a preliminary assessment of the soil on the property and has noted the presence of naturally occurring asbestos (NOA) in concentrations less than 2.5 percent. Although the actual surface area of (planned) the individual excavation areas of disturbed soil are estimated to be less than 1 acre in area, the overall project site area exceeds 1 acre, and therefore, in accordance with BAAQMD policy, an ADMP is required.

Site work shall meet the requirements of the Asbestos ATCM which states “An Asbestos Dust Mitigation Plan must specify dust mitigation practices which are sufficient to ensure that no equipment or operation emits dust that is visible crossing the property line...”. The provisions of the ADMP plan will be implemented at the initiation of site preparation activities. The plan will be submitted to the Bay Area Air Quality Management District (BAAQMD) for review and approval prior to exceeding one acre of soil disturbance.

1.1 Facility Information/ADMP Preparer

Facility Information is provided in Table 1-1 below.

Table 1-1: Facility Information/ADMP Preparer

Applicant's Name:	Pacific Gas and Electric Company
BAAQMD Facility ID:	Not Applicable
Mailing Address:	PO Box 7640 San Francisco, CA 94120
Parcel Location:	East of Illinois Street; Located South of Humboldt Street and North of 23 rd Street, San Francisco, CA 94107
ADMP Preparer	Randy Frazier, P.E./ Rfrazier@Yorkeengr.com

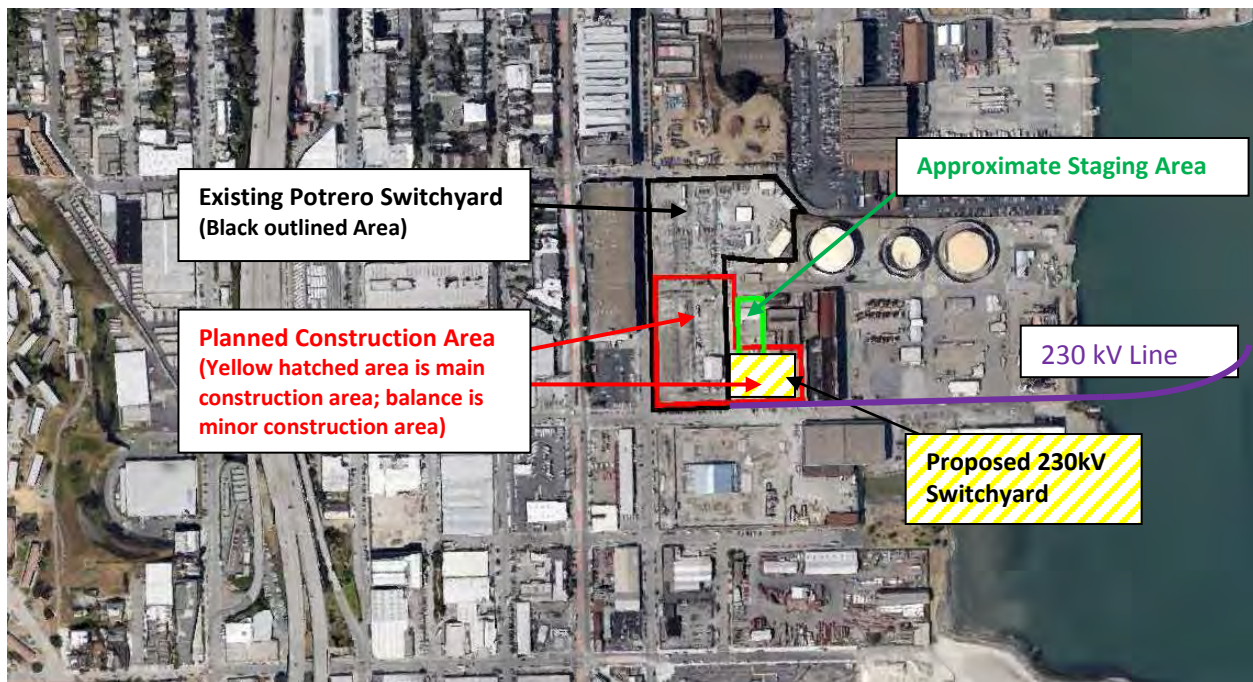
Company	Yorke Engineering, LLC
Phone	(925) 560-1041(office)/(925) 605-8471 (cell)
Fax	(925) 560-1042

2.0 PROJECT DESCRIPTION

The site preparation work that is planned for this project and is the subject of the ADMP is a small part of the PG&E Embarcadero-Potrero 230 kV Transmission Project (230 kV Transmission Project). The overall scope of the 230 kV Transmission Project is to construct a new 230 kV transmission line in San Francisco between Embarcadero Station, at the corner of Fremont and Folsom Streets and Potrero Switchyard on Illinois Street between 22nd and 23rd Streets. The new transmission line will be located primarily offshore in the San Francisco Bay, with shorter segments underground in paved city streets or on the site of the Potrero Switchyard.

Figure 1 shows the overall Potrero Switchyard plan view with areas shaded showing the location of the existing Potrero Switchyard (black), the approximate project staging area (green), the general layout of the new 230 kV transmission line, and the general work area (yellow crosshatch) where the proposed 230 kV Potrero Switchyard site preparation work that is the subject of this ADMP will occur.

Figure 2-1: Potrero Switchyard Overview: New 230 kV Transmission Line Project



The project will be performed in the following phases, with the estimated project surface areas and anticipated work commencement dates listed:

Table 2-1: Potrero Switchyard Site Preparation: Planned Schedule

Area of Construction	Surface Area, Square Feet	Construction Commencement Date
GIS Switchyard	40,750 (0.94 acres)	Mid 2014
Additional Demolition Boundary	2,435 (0.056 acres)	Mid 2014
Additional Concrete	975 (0.022 acres)	Mid 2014
Station Service	880 (0.020 acres)	First Quarter 2015
Sidewalk	2,840 (0.065 acres)	First Quarter 2015
Existing Station	11,345 (0.26 acres)	Mid 2015
Trenches	880 (0.020 acres)	Mid 2015
Total Area Disturbed, Current Phase	1.38 acres	Mid 2014 – Mid 2015

3.0 SITE GEOLOGIC CONDITIONS

The general area of the proposed project is in a low-lying area which may contain NOA due to the potential presence of serpentine materials in the artificial fill. Additional detail on the soils testing is provided in §3.1 below. The area of the project has not been characterized as an area where high concentrations of NOA inherent in the natural subsurface geology would be expected. Since the area is relatively close to the San Francisco Bay and is located in the “flatlands” the soils in the area are expected and have been found to be relatively moist with a lower propensity for airborne transport due to occasional breezy conditions. Following are details on the sampling and testing of the soils as well as a discussion of the land use in the area.

3.1 Locations of Serpentine Soils within the Project Area

The approximate areas where soil disturbance may occur are shown in the red grid pattern areas of Appendix B-3, with Additional details shown as shaded areas in Appendix B-4.

As part of an AMEC Risk Management Plan dated October 2011, a series of samples were collected from the proposed gas insulated switch (GIS) project location (shown in Appendices B-3, B-4, and Appendix C). In total ten samples were collected and analyzed for asbestos from a depth of 1' below ground surface. All of the samples were identified with less than 1% asbestos.

More recently, PG&E conducted a soil boring event to pre-characterize the soils for disposal during the excavation phase of this project in the area of the new switchyard, shown in Appendices B-3 and B-4 (“Main Site”) and in Appendix C. A total of eight composite samples were collected from borings extended to a depth of 12' below ground surface. Of the eight samples, three samples were identified as containing greater than 1% asbestos, specifically, Sample 002A at 1.25%, 003A at 2.25% and -008A at 2.5%.

In March of this year, Kleinfelder, on behalf of ABB, conducted a potholing event to determine subsurface utilities in the location of the proposed trenching work within the existing switchyard. Spoils were collected in eight 55-gallon drums with two composite samples collected (one sample from four drums). The results did not identify asbestos above 1%. The locations of the

trenching work within the existing switchyard are shown in the image in Appendix B-3 as the red-grid pattern areas west of the “Main Site” area of soil disturbance and as the green and magenta-shaded areas in the drawing in Appendix B-4.

Finally, from the AMEC soil management plan dated February 2011, a series of three soil borings were collected from the central portion of the existing switchyard. These were not specific to the area where the cables will be going as identified in green on the previously referenced map but may be a good indicator of the site conditions as no asbestos concentrations were identified above 1% at sample depths of 1’, 2’, and 7’ below ground surface. The general locations of these samples can be seen from the images presented in Appendix B-3 and B-4

From the above studies, it appears that the typically expected NOA concentrations will be less than 1% although there could be some soil areas with NOA levels as high as 2.5%.

It should be noted that since the area is near the bay, the subsurface soils in this area are presently moist, and therefore less conducive to transport off-site by short-term breezy conditions.

3.2 Land Uses within 0.25 Mile of Project Areas

Appendix B-2 presents a satellite image of the general area around the project site—and includes a 0.25 mile radius circle from the corner of the intersection of Illinois Street and 23rd Street. As shown in the figure, there are no K-12 schools within the 0.25 mile radius of the project areas where soil disturbance will occur. The area of the 0.25 mile radius circle is zoned for mixed use - industrial and residential

Based on the satellite imagery shown in Appendix B-2, the southwest, southeast, and northeast quadrants appear to be approximately 100 percent industrial areas. The northwest quadrant appears to be more than 50 percent industrial with a residential portion that is physically separated from the project by a 600 foot long, 200 foot wide approximately 40 feet high warehouse which contains The Museum of Craft and Design.

However, the warm water cove public park is located approximately 350 yards southeast of the project. Additionally, the Potrero Hills Nursery School is located in the building located on the west side of Illinois Street near Humboldt.

4.0 ASBESTOS DUST MITIGATION PLAN

In order to demonstrate compliance with the Asbestos ATCM, the following Asbestos Dust Mitigation Plan is presented as outlined in §(e)(4) parts (A) through (G) of the ATCM:

A. Track Out Prevention and Control Measures

1. PG&E will install and maintain rumble strips to reduce any track-out beyond the Site. Figure B-5 shows the planned placement of the rumble strips.
2. Off-site transport trucks that access the Site will remain on paved areas.
3. Visible track-out onto 23rd Street will be wet swept at the end of daily operations or a minimum of once every 24 hours during active site work.

B. Active Storage Piles

PG&E does not plan to have any storage piles, active or inactive, but instead plans to “live load” any excavated material. However, in the unlikely event an active storage pile is produced, PG&E will perform the following procedures to comply with the ATCM.

1. All stockpiles will be kept adequately wetted during off loading, handling, temporary storage, and off-site loading. Active stockpiles will be wetted daily during dry weather conditions and on an as-needed basis. Stockpiles will be covered with tarps during periods of inactivity.
2. Stockpiles will be located near excavation areas for characterization and determination of off-site disposal needs.
3. The surface soil of any unpaved inactive areas on the Site that have been disturbed by the project activities will be maintained adequately wetted.
4. All wetted soil shall meet the performance criteria specified in §(h)(5)(B) of the ATCM.

C. Disturbed Surface Area and Storage Piles That Will Remain Inactive for more than Seven (7) Days

PG&E does not plan to produce any stockpiles and instead will be “live loading” excavated material. Hence there will be no storage piles or disturbed surface area that remains inactive for more than seven days. In the event a stockpile is created, the pile will either be covered or kept adequately wetted.

D. Traffic On-Site on Unpaved Roads, Parking Lots and Staging Areas

1. A maximum speed of fifteen (15) miles per hour will be maintained for all Site traffic. The speed restriction will apply to the following vehicles and equipment:
 - a) Heavy Equipment (wheeled and track).
 - b) Onsite haul trucks.
 - c) Water trucks and/or wet sweeping equipment.
 - d) Service and delivery vehicles.
 - e) Off-site haul trucks.
2. Unpaved areas utilized for roads, parking, and staging will be wetted every two hours of active operations or sufficiently often to keep the area adequately wetted so as to eliminate visible dust during active construction activities.

E. Earthmoving Activities

1. Water will be applied by means of truck(s), hoses and/or sprinklers prior to any land clearing or earth movement to minimize dust emissions.
2. Additional water will be added during active excavation, material handling, and loading. Active excavation areas will be wetted a minimum of twice daily during dry-weather and more frequently as needed.
3. Haul vehicles transporting soil into or out of the property shall be covered.

4. A water truck shall be on site at all times. Water shall be applied to disturbed areas as necessary to control dust.
5. All wetted soil shall meet the performance criteria specified in §(h)(5)(B) of the ATCM.
6. Equipment speeds shall not exceed 15 miles per hour (mph) on construction sites. Speed signs shall be posted at the entrance to the site.
7. Excavation operations will be suspended if control measures are not adequate in preventing dust migration beyond the Site boundaries during periods of high wind speeds.
8. Security measures (gate) shall be placed at the project entrance to prevent the entry of unauthorized vehicles during non-working hours and weekends.

F. Off-Site Transport

1. If required, spoil materials will only be transported offsite to approved locations.
2. Off-site haul trucks utilized for transportation of the stockpiled soil will be maintained to prevent spillage from the cargo compartment. The integrity of the cargo compartment will be inspected prior to loading.
3. Any excess material on shelf areas of the truck will be removed and the load wetted. All wetted soil shall meet the performance criteria specified in §(h)(5)(B) of the ATCM.
4. Off-site haul trucks will tarp the cargo load prior to departing the site.
5. When feasible, all off-site haul trucks will access the Site via established rumble strips at the proposed access points depicted in Appendix B-5.

G. Post-Construction Stabilization of Disturbed Areas

1. Areas disturbed during the project will be covered with asphalt and non-asbestos containing base rock.

H. Air Monitoring for Asbestos

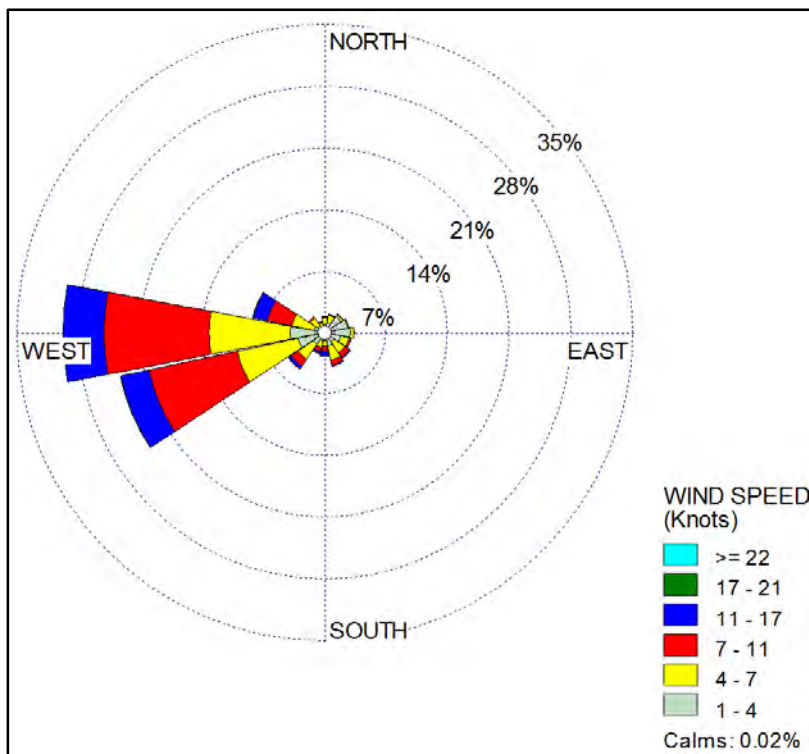
Although the potential area of disturbed soil is small, with low asbestos concentrations in the soil, located in an area that is largely industrial or commercial, PG&E proposes to conduct air monitoring at four locations (points of the compass) at the site. This is due to the concern regarding the potential for exposures at the Warm Water Cove Park southeast of the site, as well as the residential area along 3rd and Tennessee Streets and the Friends of Potrero Hills Nursery School located near the intersection of Humboldt and Illinois Streets.

PG&E proposes to collect area background air samples during any active site work and to continue until the sooner of the date Bay Area Air Quality Management District allows cessation of monitoring activities or until allowed by Title 17 Section 93105 (e)(2)(G). Air monitoring stations will be established at four (4) locations, along the north, south, east and west fence line boundaries of the site.

Approximate locations of the portable air monitoring stations are shown in the Figures in Appendices B-3 and B-4. The monitoring stations will be placed within the boundary of the construction yard for security and sample integrity, and will be placed to capture representative samples of the air from the site, regardless of wind direction. Sample stations shown in the figures in Appendices B-3 and B-4 are identified as Asbestos Monitoring Station AMS1 (north), AMS2 (east), AMS3 (south), and AMS4 (west).

Although the anticipated wind direction as indicated by the wind rose of the San Francisco Sewage Treatment Plant (STP) as well as San Francisco Mission Bay is from the west/southwest, PG&E proposes to deploy monitoring stations at the four points of the compass in order to eliminate the need to relocate monitoring stations in the event the prevailing wind shifts substantially. The prevailing winds of the SF STP site are presented in the wind rose in Figure 4-1. The Potrero Substation site is located between the Mission Bay and SF STP Weather Stations. Both stations have similar wind patterns and show a very consistent wind pattern from the west/southwest.

Figure 4-1: Wind Rose Taken from San Francisco STP; 0.75 Miles Southwest of Site



PG&E will halt site activities in the event the wind speed as reported from the SF STP meteorological page on the BAAQMD website reaches or exceeds 25 mph for at least 30 minutes. The URL is <http://gate1.baaqmd.gov/aqmet/MetSiteView.aspx?SID=5801>.

Filter samples will be collected approximately four (4) to five (5) feet above ground level on 25 millimeter mixed cellulose ester (MCE) filters with a pore size less than or equal to 0.45μ and the cassette will be equipped with a 50 mm anti-static cowl. Air will be drawn through the sample filter using a personal air pump operating at between 2 and 2.5

liters/minute for the course of the work. The air pump will be calibrated with sample media in line before and after the sampling period.

A blank sample cassette will be submitted for laboratory analysis each day of air sampling for quality control purposes. Analysis of all samples shall follow the Transmission Electron Microscopy (TEM) analytical method specified by the United States Environmental Protection Agency Asbestos Hazard Emergency Response Act (AHERA) criteria for asbestos as found in 40 CFR part 763 Subpart E, Appendix A with the following exceptions:

- 1) The analytical sensitivity shall be 0.001 structures per cubic centimeter (0.001 s/cc); and
- 2) All asbestos structures with an aspect ratio greater than three to one (3 to 1) shall be counted irrespective of length.

A QA/QC Plan containing air monitoring protocols will be prepared for the operation and maintenance of the monitoring stations and will be kept on site and will be available for inspection upon request.

Daily sampling information will be logged on the Asbestos Air Monitoring Log Sheet and correlated with the laboratory results.

A monthly report will be prepared and submitted to BAAQMD for review.

In the event that representative air monitoring results demonstrate the ambient concentrations are relatively low, PG&E may propose suspending additional monitoring.

APPENDIX A – ASBESTOS DUST MITIGATION PLAN APPLICATION

**APPENDIX B – PG&E: POTRERO SWITCHYARD AREA AND DETAIL SITE
VIEWS**

APPENDIX C – PG&E: POTRERO SWITCHYARD SOIL BORING RESULTS

APPENDIX D – AIR MONITORING LOG SHEET

APPENDIX A – ASBESTOS DUST MITIGATION PLAN APPLICATION



BAY AREA AIR QUALITY MANAGEMENT DISTRICT
 939 Ellis Street
 San Francisco, California 94109
 (415) 771-6000

For District Use Only	
Date Rec'd	
File #	

ASBESTOS AIRBORNE TOXIC CONTROL MEASURE FOR CONSTRUCTION AND GRADING OPERATIONS

§ 93105, Title 17, California Code of Regulations

ASBESTOS DUST MITIGATION PLAN APPLICATION

1. Company and Project Information

Company Name and Address		Project Location	
Name		Location	
Address		Address	
City/State	Zip	City/State	Zip
Contact		Start Date:	
Phone	Fax	Estimated Completion Date:	

The following information is requested to assist in the evaluation of your Asbestos Dust Mitigation Plan. Omission of this information may result in a delay of the completion of the evaluation and approval of the plan. Please provide the information requested below; place a checkmark in front of each of the categories that applies.

2. Detailed Project Information

Type of Project: (Check all that applies)

Road or Railway Construction	Trenching / Utilities Work
Road Maintenance	Other (please describe)
Housing Development	_____
Commercial Property Development	

3. Detailed Site Information

Areas and Facilities within a quarter mile (400 meters) of the Project: (Check all that applies)

Residential	Hospital / Nursing Home	Other (please describe)
Commercial	School	
Industrial	Park / Playground	
Rural		_____

ASBESTOS DUST MITIGATION PLAN APPLICATION

BAY AREA AIR QUALITY MANAGEMENT DISTRICT 939 Ellis Street, San Francisco, CA 93109

4. Addition Information

The following information MUST be included:

Map(s) clearly indicating:

- | | |
|-------------------------------|---------------------------|
| Property lines / boundaries | Storage areas / piles |
| Rights of way / easements | Track-out control |
| Areas to be cleared or graded | Staging areas for removal |
| Trenching areas | Truck routes |
| Excavation sites | On-site parking lots |

If available, please attach the following information:

- Geologic Information
- Topographical Maps
- Meteorological Data
- See attached SF STP Windrose

CONSTRUCTION AND GRADING OPERATIONS CHECKLIST FOR PROJECTS GREATER THAN AN ACRE

ELEMENTS THAT MUST BE INCLUDED:

Each of the following sources of dust emissions **MUST** be addressed in the Asbestos Dust Mitigation Plan:

- Track-out onto the paved public road;
- Active storage piles;
- Inactive disturbed surface areas and storage piles;
- Traffic on unpaved on-site roads;
- Earthmoving activities;
- Off-site transport of materials; and
- Post-project stabilization of disturbed soil surfaces.

ASBESTOS AIR MONITORING PLANS:

If required by the District, complete an Asbestos Air Monitoring Plan for District approval.

An air monitoring plan **MAY BE** required if one or more of the following lies within a quarter mile (400 meters) of any boundary of an area to be disturbed:

- Residence;
- School / Daycare center;
- Industrial Facility
- Business;
- Park / Playground;
- Hospital / Nursing Home

Development of an Asbestos Air Monitoring Plan does not constitute a requirement to implement air monitoring.

However, if the District would like to determine the effectiveness of the application of the dust mitigation measures listed in your dust mitigation plan, the plan would be required to be implemented within one business day of notification from the District.

ASBESTOS DUST MITIGATION PLAN APPLICATION

BAY AREA AIR QUALITY MANAGEMENT DISTRICT 939 Ellis Street, San Francisco, CA 93109

5. Track-out onto the paved public road

Please mark the box preceding each measure that will be implemented:

THIS MEASURE MUST BE ADDRESSED:

Any visible track-out on a paved public road at any location where vehicles exit the work site **MUST** be removed; Removal **MUST** be done using wet sweeping or a HEPA filter-equipped vacuum device at the end of the work day or at least one time per day.

AND installation of one or more of the following track-out prevention measures:

A gravel pad designed using good engineering practices to clean the tires of exiting vehicles

A tire shaker

A wheel wash system

Pavement extending for not less than fifty (50) consecutive feet from the intersection with the paved public road

Any other measure(s) as effective as the measures listed above: (Briefly describe below)

6. Active Storage Piles

THIS MEASURE MUST BE ADDRESSED:

Keep active storage piles adequately wet or covered with tarps.

7. Inactive Areas and Storage Piles

Please mark the box preceding each measure that will be implemented:

Control for disturbed surface areas and storage piles that will remain inactive for more than seven (7) days shall include one or more of the following:

Keep the surface adequately wet;

Establish and maintain of surface crusting sufficient to satisfy the test in subsection 93105(h)(6);

Apply chemical dust suppressants or chemical stabilizers according to the manufacturer's recommendations;

Cover with tarp(s) or vegetative cover;

Install wind barriers of fifty percent (50%) porosity around three (3) sides of a storage pile;

Install wind barriers across open areas;

Any other measure(s) deemed as effective as the measures listed above. (Briefly describe below)

ASBESTOS DUST MITIGATION PLAN APPLICATION

BAY AREA AIR QUALITY MANAGEMENT DISTRICT 939 Ellis Street, San Francisco, CA 93109

8. Traffic on On-Site Unpaved Roads, Parking Lots, and Staging Areas

Please mark the box preceding each measure that will be implemented:

THIS MEASURE MUST BE ADDRESSED:

A maximum vehicle speed limit of fifteen (15) miles per hour or less;

AND one or more of the following:

Water every two hours of active operations or sufficiently often to keep the area adequately wetted;

Apply chemical dust suppressants consistent with manufacturer's directions;

Install wind barriers of fifty (50) percent porosity around three (3) sides of a storage pile;

Maintain a gravel cover with a silt content that is less than five (5) percent and asbestos content that is less than 0.25 percent, as determined using an approved asbestos bulk test method, to a depth of three (3) inches on the surface being used for travel; or

Any other measure(s) deemed as effective as the measures listed above. (Briefly describe below)

9. Earth Moving Activities

Please mark the box preceding each measure that will be implemented:

Control for earthmoving activities must include one or more of the following:

Pre-wet the ground to the depth of anticipated cuts;

Suspend grading operations when wind speeds are high enough to result in dust emissions crossing the property line, despite the application of dust mitigation measures;

Apply water prior to any land clearing; or

Any other measure(s) deemed as effective as the measures listed above. (Briefly describe below)

ASBESTOS DUST MITIGATION PLAN APPLICATION

BAY AREA AIR QUALITY MANAGEMENT DISTRICT 939 Ellis Street, San Francisco, CA 93109

10. Off-Site Transport

Please mark the box preceding each measure that will be implemented:

THIS MEASURE MUST BE ADDRESSED:

The owner or operator must ensure that no trucks are allowed to transport excavated material off-site unless:

Maintain trucks such that no spillage can occur from holes or other openings in cargo compartments; **AND**
Loads are adequately wet;

AND Either of the following measures:

Cover with tarps; or
Load such that the material does not touch the front, back, or sides of the cargo compartment at any point less than six inches from the top and that no point of the load extends above the top of the cargo compartment.

11. Post Construction Stabilization of Disturbed Areas

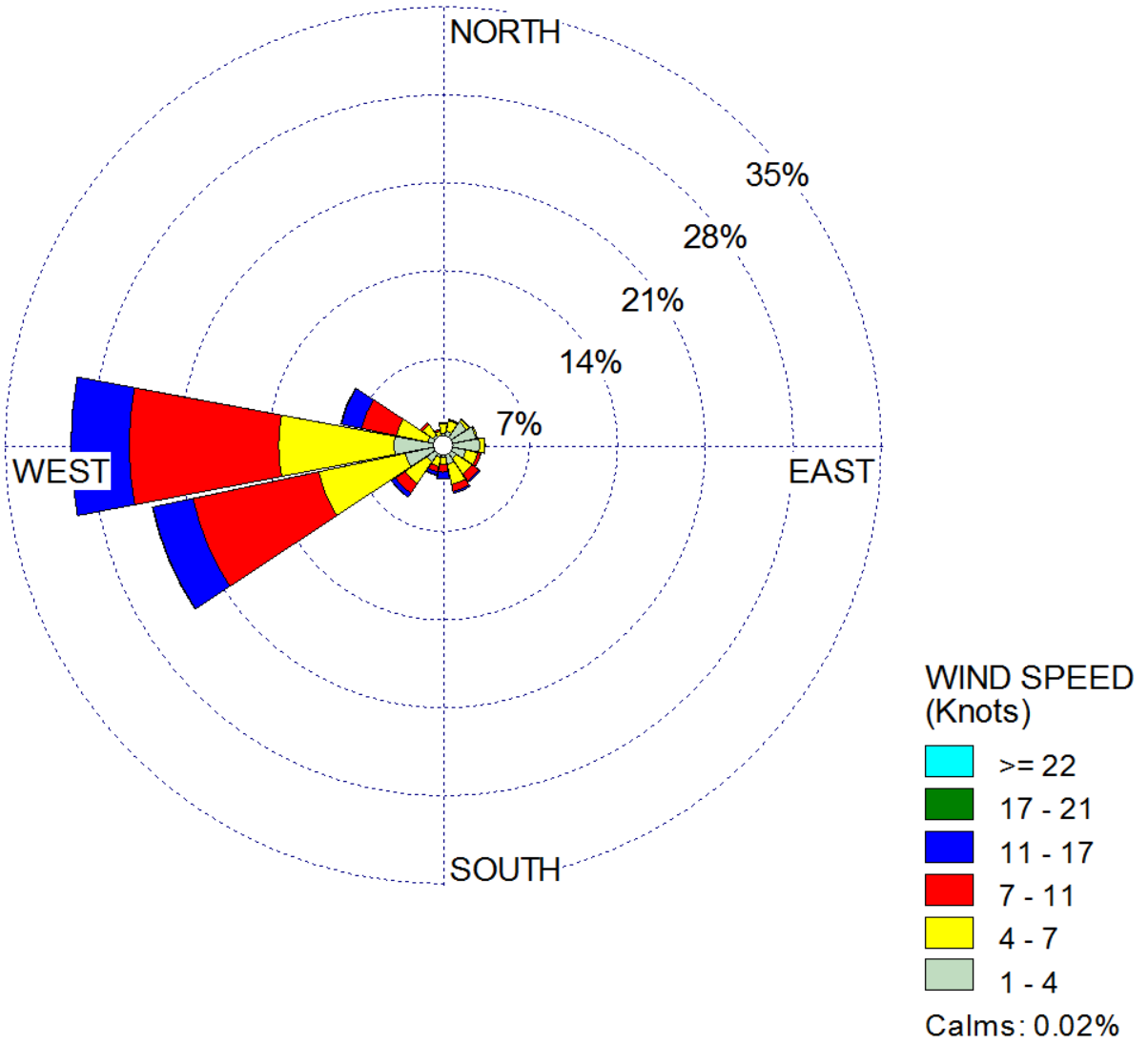
Please mark the box preceding each measure that will be implemented:

Upon completion of the project, disturbed surfaces shall be stabilized using **one or more of the following:**

Establish a vegetative cover;
Place at least three (3.0) inches of non-asbestos-containing material;
Paving; or
Any other measure deemed sufficient to prevent wind speeds of ten (10) miles per hour or greater from causing visible dust emissions. (Briefly describe below)

San Francisco Sewage Treatment Plant (STP) Windrose, 2005

SF STP is located approximately 0.75 mile Southwest of Potrero Site



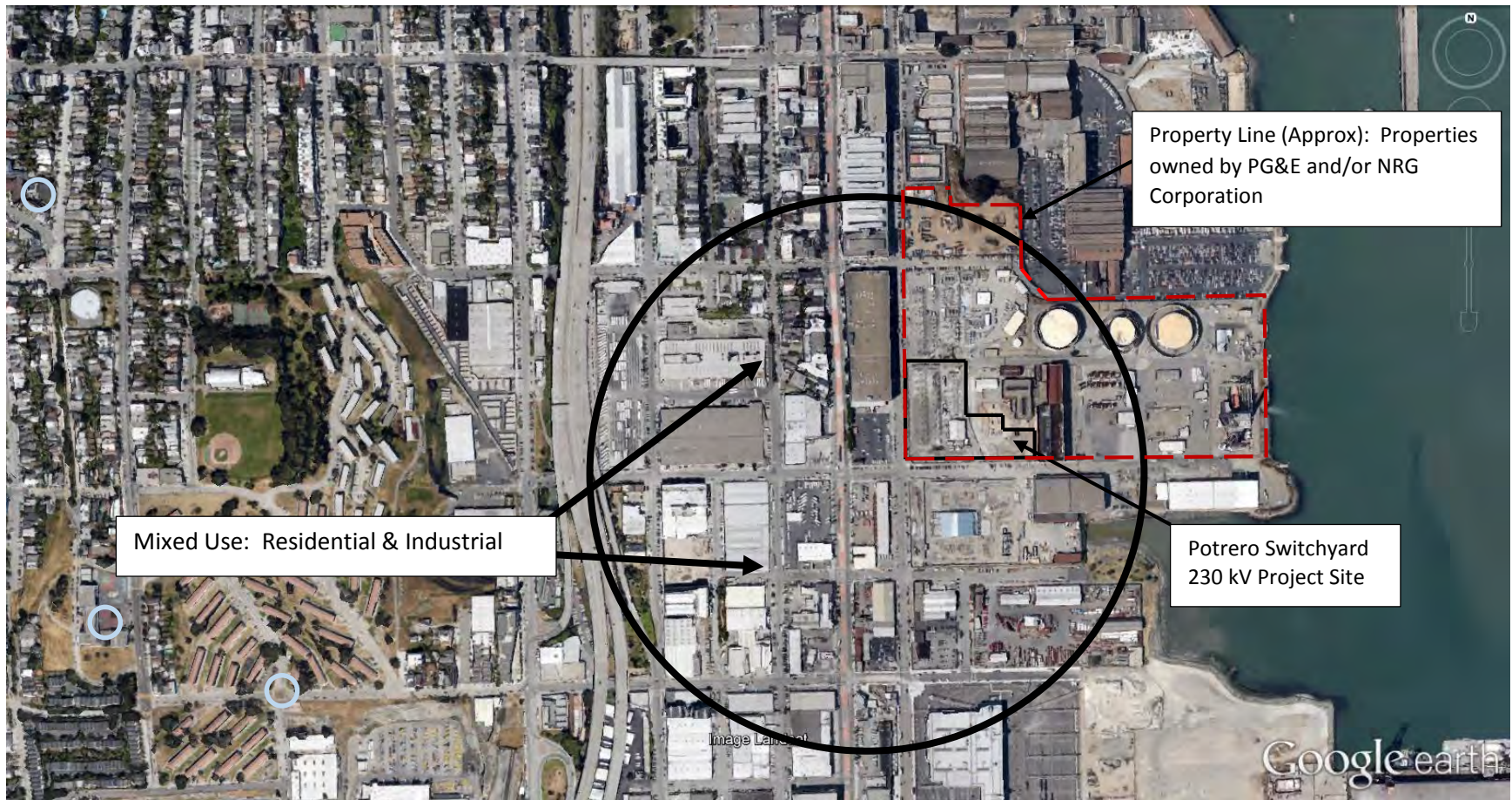
**APPENDIX B – PG&E: POTRERO SWITCHYARD AREA AND DETAIL SITE
VIEWS**

Appendix B-1: PG&E: Potrero Switching Station Construction Site: 1 Mile Radius



○ School Location

Appendix B-2 PG&E: Potrero Switching Station Construction Site: 400 Meter Radius



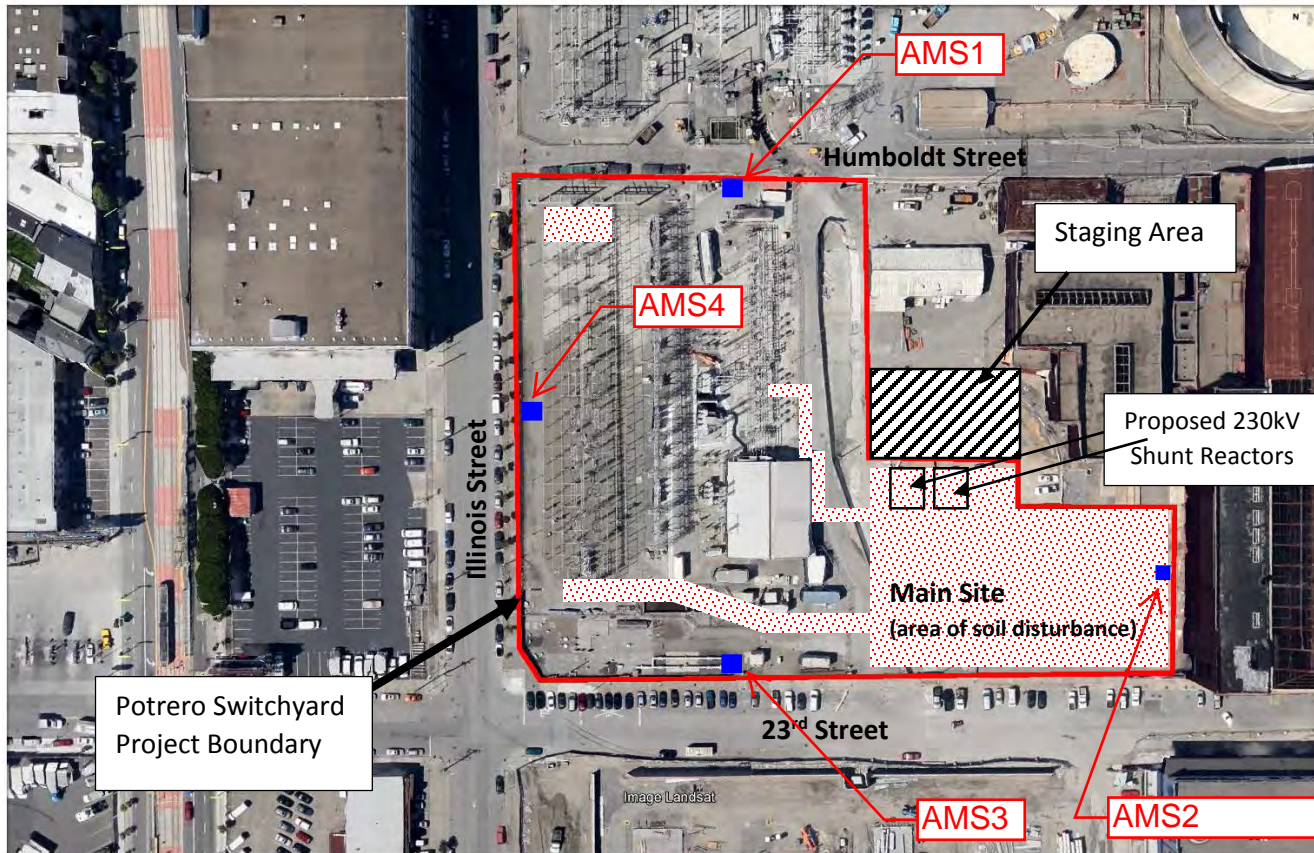
Property Line (Approx): Properties owned by PG&E and/or NRG Corporation

Mixed Use: Residential & Industrial

Potrero Switchyard 230 kV Project Site

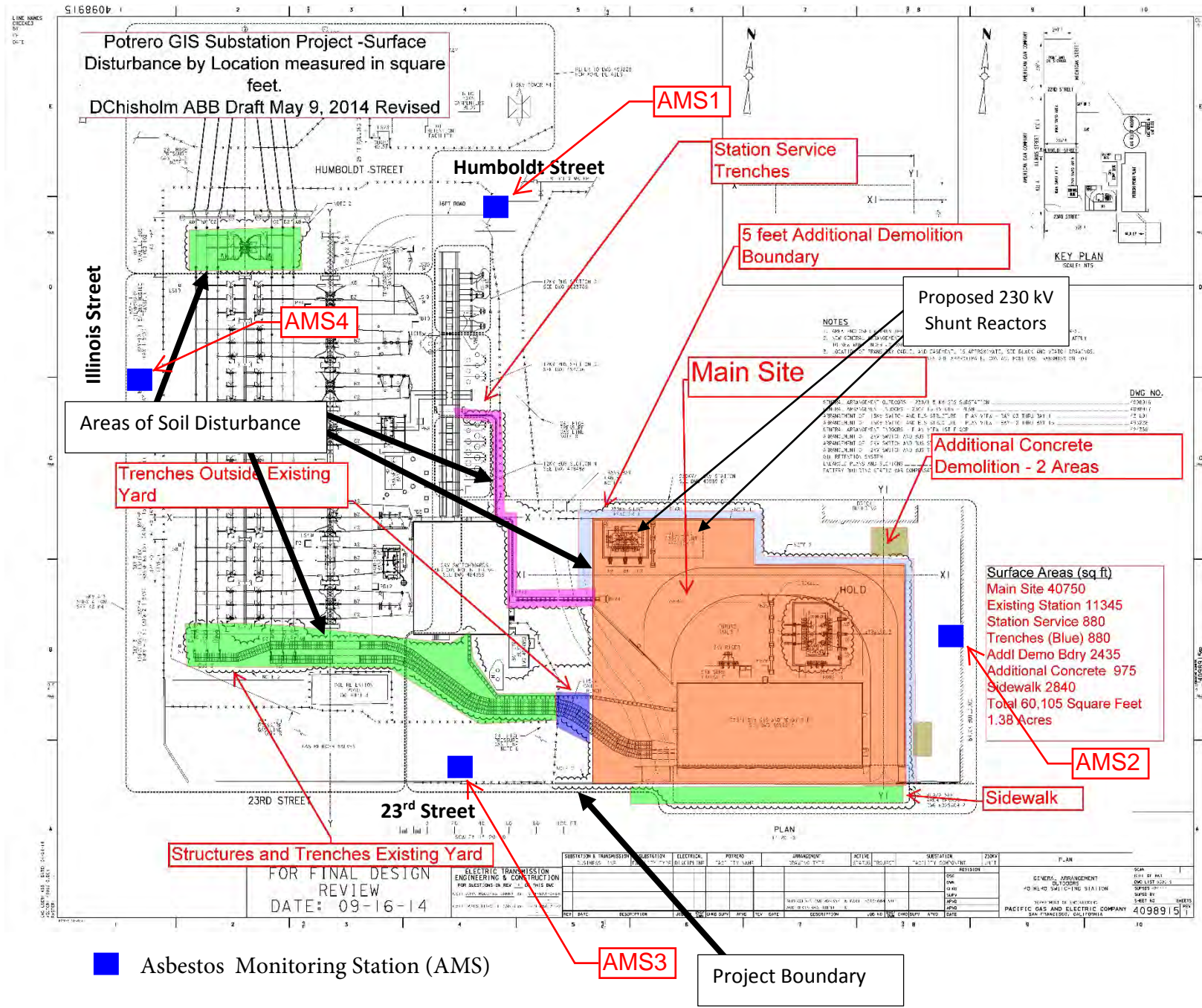
○ School Location

Appendix B-3: PG&E: Potrero Switching Station Construction Site: Areas of Excavation (approx.)



■ Asbestos Monitoring Station (AMS)

Appendix B-4: PG&E: Potrero Switching Station Construction Site: Potential Surface Disturbance Areas –Detail View

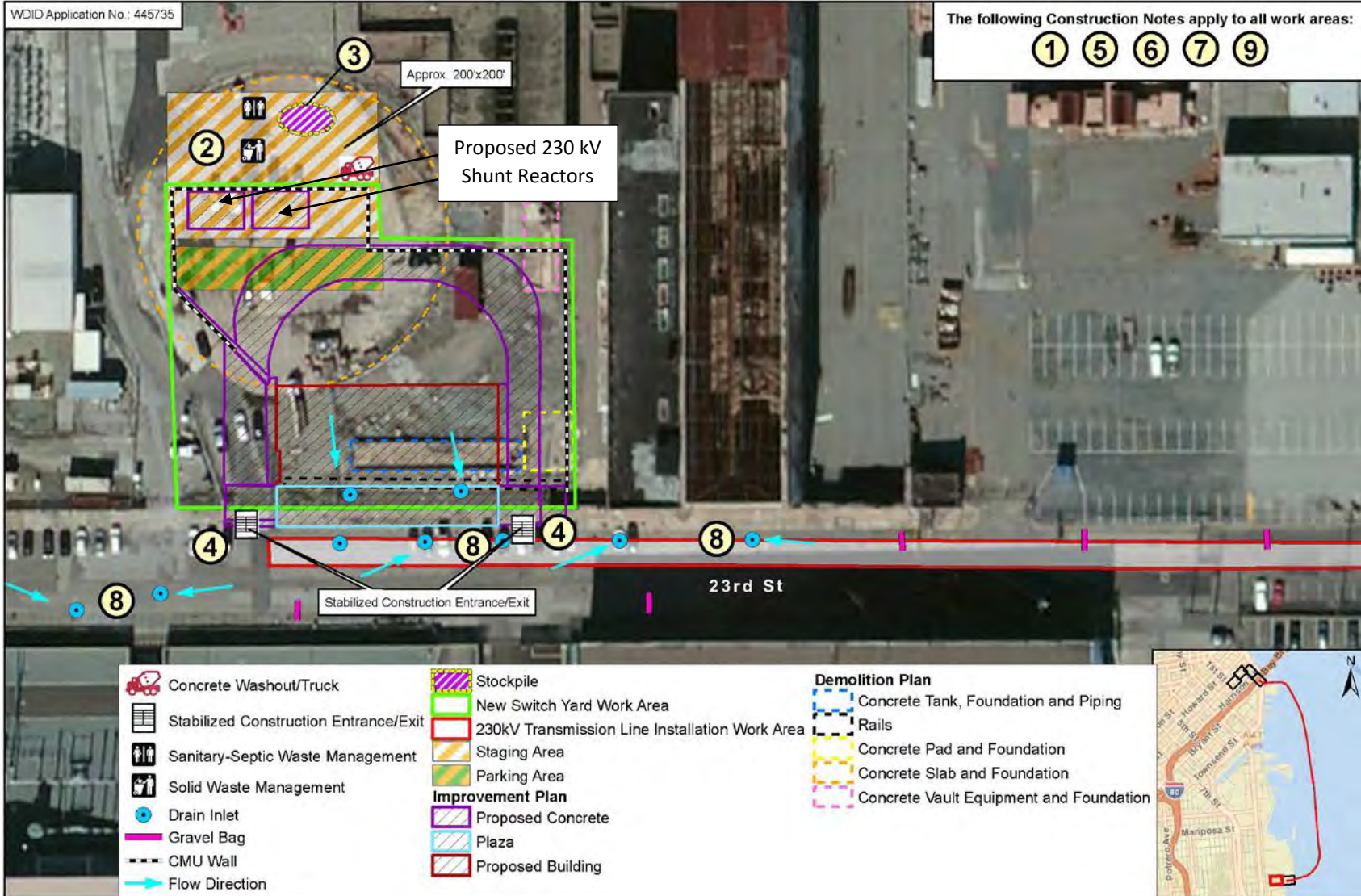


Appendix B-5: PG&E: Potrero Switching Station Site: Construction Traffic Detail/Potential Stockpile Locations

WDID Application No.: 445735

The following Construction Notes apply to all work areas:

① ⑤ ⑥ ⑦ ⑨



- Concrete Washout/Truck
- Stabilized Construction Entrance/Exit
- Sanitary-Septic Waste Management
- Solid Waste Management
- Drain Inlet
- Gravel Bag
- CMU Wall
- Flow Direction

- Stockpile
- New Switch Yard Work Area
- 230kV Transmission Line Installation Work Area
- Staging Area
- Parking Area
- Improvement Plan**
- Proposed Concrete
- Plaza
- Proposed Building

- Demolition Plan**
- Concrete Tank, Foundation and Piping
- Rails
- Concrete Pad and Foundation
- Concrete Slab and Foundation
- Concrete Vault Equipment and Foundation



APPENDIX C – PG&E: POTRERO SWITCHYARD SOIL BORING RESULTS

Appendix C PG&E: Potrero Switchyard: Location of Direct Push Boreholes

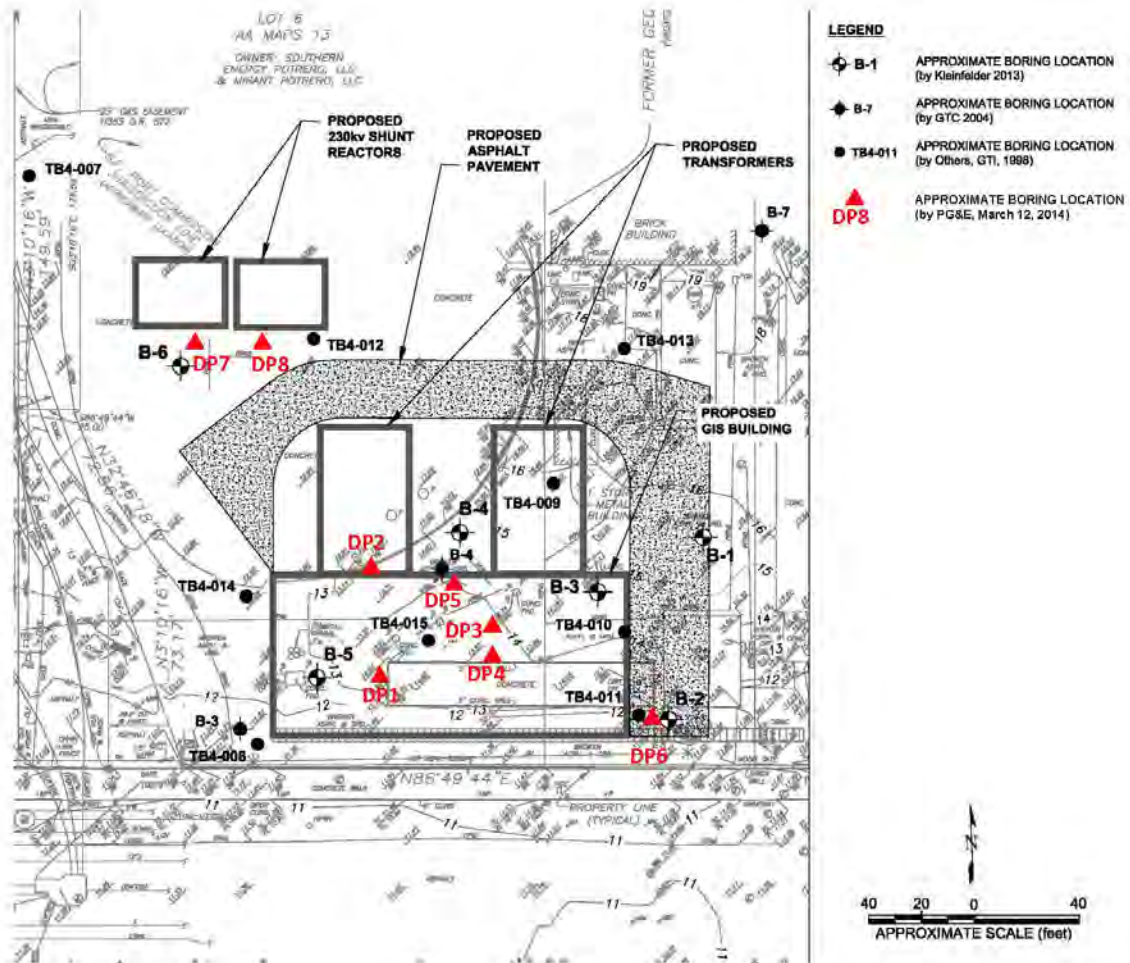


Figure 1. Locations of PG&E March 12, 2014 direct push boreholes Proposed PG&E ZA-1 Potrero Switchyard

- Notes:** 1) Each borehole was advanced to a total depth of 11.5 or 12 feet.
 2) One composite sample from each borehole was collected and analyzed.

Basemap: Portion of PLATE 2 SITE PLAN from GEOTECHNICAL INVESTIGATION REPORT, PACIFIC GAS AND ELECTRIC COMPANY, POTRERO SUBSTATION GIS PROJECT, SAN FRANCISCO, CALIFORNIA, Project No. 134711, prepared by Kleinfelder, October 3, 2013.



LOG OF DIRECT PUSH BOREHOLE

DP1

Project Name: Proposed ZA-1 Potrero Switchyard
Location: Former MGP Gas Holder Yard, San Francisco, CA

page 1 of 1

Driller(s) John Rogie, California Push Technologies, Inc.	Probe Location West end existing concrete slab	Total Depth
Rig Geoprobe 6625	Proposed GIS building	12.0 feet
Hole Diameter 2.5-inch	Surface Asphalt	Water Depth
Soil Sampler Geoprobe Macro-core (MC) with catcher	Datum 13 feet AMSL	N/A
Water Sampler None	Water Samples None	Date
Backfill Neat cement	Logged by John Woodruff, PG&E	Mar-12-2014

Sampler	Recovery/ Drive (feet)	PID (ppm)	Sample Container	Sample ID	Depth (feet)	Sample	Soil Symbol (USCS)	DESCRIPTION (soil type, color, moisture content, consistency, density, etc.)
					0		A/C	ASPHALT AND BASEROCK: two inches, weak.
MC	1.0/ 4.0	N/A			2			CLAYEY SAND: dark brown to dark gray, dry, loose, some particles of angular lampblack. No chemical odor. Pushed easily. FILL.
MC	1.5/ 4.0	N/A	8-oz Jar	DP1	4	SC		
MC	2.0/ 4.0	N/A			6		SW	WELL GRADED SAND: dark gray, dry, loose, some particles of angular lampblack. No chemical odor. Pushed easily. FILL.
					8			
					10			
					12			Bottom of borehole at 12.0 feet.
					14			Groundwater was not encountered.
					16			Collected one composite sample as follows: placed approximately 2.5 to 3 ounces of soil from each Macro-core drive into a new, one-gallon zip top bag, mixed the soil, and transferred the soil into an 8-ounce sample jar.
					18			Borehole was grouted to surface with neat cement.
					20			

Soil Symbol Abbreviations: C=Clay or clayey, M=Silt or silty, O=Organic soil, L=Low plasticity, H=High plasticity, G=Gravel or gravelly, S=Sand or sandy, W=Well graded, P=Poorly graded.
Consistency Terms: very soft, soft, medium stiff, stiff, very stiff, and hard. **Apparent Density Terms:** very loose, loose, medium dense, dense, and very dense.
Soil Components: boulders = >12", cobbles = 12" to 3", coarse gravel = 3" to 3/4", fine gravel = 3/4" to #4, coarse sand = #4 to #10, medium sand = #10 to #40, fine sand = #40 to #200.



LOG OF DIRECT PUSH BOREHOLE

DP2

Project Name: Proposed ZA-1 Potrero Switchyard
Location: Former MGP Gas Holder Yard, San Francisco, CA

page 1 of 1

Driller(s) John Rogie, California Push Technologies, Inc.	Probe Location Just south of gas holder pad	Total Depth
Rig Geoprobe 6625	Proposed transformer pad	12.0 feet
Hole Diameter 2.5-inch	Surface Asphalt	Water Depth
Soil Sampler Geoprobe Macro-core (MC) with catcher	Datum 13 feet AMSL	N/A
Water Sampler None	Water Samples None	Date
Backfill Neat cement	Logged by John Woodruff, PG&E	Mar-12-2014

Sampler	Recovery/ Drive (feet)	PID (ppm)	Sample Container	Sample ID	Depth (feet)	Sample	Soil Symbol (USCS)	DESCRIPTION (soil type, color, moisture content, consistency, density, etc.)
					0		A/C	ASPHALT AND BASEROCK: two inches, weak.
MC	1.2/ 4.0	N/A			2			WELL GRADED SAND: dark brown to black, dry, loose, minor particles of angular lampblack. No chemical odor. Pushed easily. FILL.
MC	1.5/ 4.0	N/A	8-oz Jar	DP2	4		SW	
MC	1.8/ 4.0	N/A			6			
					8			BEDROCK at 11.5 feet: serpentine, olive, severely weathered to a clayey sand, low hardness. No chemical odor.
					10		BR	
					12			Bottom of borehole at 12.0 feet.
					14			Groundwater was not encountered.
					16			Collected one composite sample as follows: placed approximately 2.5 to 3 ounces of soil from each Macro-core drive into a new, one-gallon zip top bag, mixed the soil, and transferred the soil into an 8-ounce sample jar.
					18			Borehole was grouted to surface with neat cement.
					20			

Soil Symbol Abbreviations: C=Clay or clayey, M=Silt or silty, O=Organic soil, L=Low plasticity, H=High plasticity, G=Gravel or gravelly, S=Sand or sandy, W=Well graded, P=Poorly graded.
Consistency Terms: very soft, soft, medium stiff, stiff, very stiff, and hard. **Apparent Density Terms:** very loose, loose, medium dense, dense, and very dense.
Soil Components: boulders = >12", cobbles = 12" to 3", coarse gravel = 3" to 3/4", fine gravel = 3/4" to #4, coarse sand = #4 to #10, medium sand = #10 to #40, fine sand = #40 to #200.



LOG OF DIRECT PUSH BOREHOLE

DP3

Project Name: Proposed ZA-1 Potrero Switchyard
Location: Former MGP Gas Holder Yard, San Francisco, CA

page 1 of 1

Driller(s) John Rogie, California Push Technologies, Inc.	Probe Location North of existing concrete slab	Total Depth
Rig Geoprobe 6625	Proposed GIS building	11.5
Hole Diameter 2.5-inch	Surface Asphalt	Water Depth
Soil Sampler Geoprobe Macro-core (MC) with catcher	Datum 14 feet AMSL	N/A
Water Sampler None	Water Samples None	Date
Backfill Neat cement	Logged by John Woodruff, PG&E	Mar-12-2014

Sampler	Recovery/ Drive (feet)	PID (ppm)	Sample Container	Sample ID	Depth (feet)	Sample	Soil Symbol (USCS)	DESCRIPTION (soil type, color, moisture content, consistency, density, etc.)
					0		A/C	ASPHALT AND BASEROCK: two inches, weak.
MC	1.5/ 4.0	N/A			2			
MC	2.0/ 4.0	N/A	8-oz Jar	DP3	4			WELL GRADED SAND: dark brown to black, dry, loose, particles of angular lampblack, fine sand-size particles of reddish brown brick, and one angular 3/4-inch particle of angular granite. No chemical odor. Pushed easily. FILL.
MC	2.0/ 4.0	N/A			6	SW		
					8			
MC	2.0/ 4.0	N/A			10		BR	BEDROCK at 11 feet: serpentine, olive, moderately weathered overall, low hardness. A one-inch piece of slightly weathered serpentine did not contain macroscopic asbestos veins. No chemical odor.
					12			Bottom of borehole (refusal) at 11.5 feet.
					14			Groundwater was not encountered.
					16			Collected one composite sample as follows: placed approximately 2.5 to 3 ounces of soil from each Macro-core drive into a new, one-gallon zip top bag, mixed the soil, and transferred the soil into an 8-ounce sample jar.
					18			Borehole was grouted to surface with neat cement.
					20			

Soil Symbol Abbreviations: C=Clay or clayey, M=Silt or silty, O=Organic soil, L=Low plasticity, H=High plasticity, G=Gravel or gravelly, S=Sand or sandy, W=Well graded, P=Poorly graded.
Consistency Terms: very soft, soft, medium stiff, stiff, very stiff, and hard. **Apparent Density Terms:** very loose, loose, medium dense, dense, and very dense.
Soil Components: boulders = >12", cobbles = 12" to 3", coarse gravel = 3" to 3/4", fine gravel = 3/4" to #4, coarse sand = #4 to #10, medium sand = #10 to #40, fine sand = #40 to #200.



LOG OF DIRECT PUSH BOREHOLE

DP4

Project Name: Proposed ZA-1 Potrero Switchyard
Location: Former MGP Gas Holder Yard, San Francisco, CA

page 1 of 1

Driller(s) John Rogie, California Push Technologies, Inc.	Probe Location North of existing concrete slab	Total Depth
Rig Geoprobe 6625	Proposed GIS building	12.0 feet
Hole Diameter 2.5-inch	Surface Asphalt	Water Depth
Soil Sampler Geoprobe Macro-core (MC) with catcher	Datum 13.5 feet AMSL	N/A
Water Sampler None	Water Samples None	Date
Backfill Neat cement	Logged by John Woodruff, PG&E	Mar-12-2014

Sampler	Recovery/ Drive (feet)	PID (ppm)	Sample Container	Sample ID	Depth (feet)	Sample	Soil Symbol (USCS)	DESCRIPTION (soil type, color, moisture content, consistency, density, etc.)
					0		A/C	ASPHALT AND BASEROCK: two inches, weak.
MC	2.0/ 4.0	N/A			2			CLAYEY SAND to WELL GRADED SAND: olive to gray to black, dry, loose, minor particles of angular lampblack. No chemical odor. Two inches of light gray ash-like material in the 8-12 foot drive. Pushed easily. FILL.
MC	2.2/ 4.0	N/A	8-oz Jar	DP4	4			
MC	1.6/ 4.0	N/A			6	SC/ SW		
					8			Bottom of borehole at 12.0 feet. Groundwater was not encountered. Collected one composite sample as follows: placed approximately 2.5 to 3 ounces of soil from each Macro-core drive into a new, one-gallon zip top bag, mixed the soil, and transferred the soil into an 8-ounce sample jar. Borehole was grouted to surface with neat cement.
					10			
					12			
					14			
					16			
					18			
					20			

Soil Symbol Abbreviations: C=Clay or clayey, M=Silt or silty, O=Organic soil, L=Low plasticity, H=High plasticity, G=Gravel or gravelly, S=Sand or sandy, W=Well graded, P=Poorly graded.
Consistency Terms: very soft, soft, medium stiff, stiff, very stiff, and hard. **Apparent Density Terms:** very loose, loose, medium dense, dense, and very dense.
Soil Components: boulders = >12", cobbles = 12" to 3", coarse gravel = 3" to 3/4", fine gravel = 3/4" to #4, coarse sand = #4 to #10, medium sand = #10 to #40, fine sand = #40 to #200.



LOG OF DIRECT PUSH BOREHOLE

DP5

Project Name: Proposed ZA-1 Potrero Switchyard
Location: Former MGP Gas Holder Yard, San Francisco, CA

page 1 of 1

Driller(s) John Rogie, California Push Technologies, Inc.	Probe Location North of existing concrete slab	Total Depth
Rig Geoprobe 6625	Proposed GIS building	12.0 feet
Hole Diameter 2.5-inch	Surface Asphalt	Water Depth
Soil Sampler Geoprobe Macro-core (MC) with catcher	Datum 14 feet AMSL	N/A
Water Sampler None	Water Samples None	Date
Backfill Neat cement	Logged by John Woodruff, PG&E	Mar-12-2014

Sampler	Recovery/ Drive (feet)	PID (ppm)	Sample Container	Sample ID	Depth (feet)	Sample	Soil Symbol (USCS)	DESCRIPTION (soil type, color, moisture content, consistency, density, etc.)
					0		A/C	ASPHALT AND BASEROCK: two inches, weak.
MC	1.5/ 4.0	N/A			2			WELL GRADED SAND: dark gray to black, dry, loose, some particles of angular lampblack. Contains minor fine sand-size particles of reddish brown brick. No chemical odor. Pushed easily. FILL.
MC	1.5/ 4.0	N/A	8-oz Jar	DP5	4	SW		
MC	1.8/ 4.0	N/A			6			
MC	1.8/ 4.0	N/A			8		SC	CLAYEY SAND: dark gray to black, dry, loose, some particles of angular lampblack. No chemical odor. Pushed easily. FILL.
					10			
					12			Bottom of borehole at 12.0 feet.
					14			Groundwater was not encountered.
					16			Collected one composite sample as follows: placed approximately 2.5 to 3 ounces of soil from each Macro-core drive into a new, one-gallon zip top bag, mixed the soil, and transferred the soil into an 8-ounce sample jar.
					18			Borehole was grouted to surface with neat cement.
					20			

Soil Symbol Abbreviations: C=Clay or clayey, M=Silt or silty, O=Organic soil, L=Low plasticity, H=High plasticity, G=Gravel or gravelly, S=Sand or sandy, W=Well graded, P=Poorly graded.
Consistency Terms: very soft, soft, medium stiff, stiff, very stiff, and hard. **Apparent Density Terms:** very loose, loose, medium dense, dense, and very dense.
Soil Components: boulders = >12", cobbles = 12" to 3", coarse gravel = 3" to 3/4", fine gravel = 3/4" to #4, coarse sand = #4 to #10, medium sand = #10 to #40, fine sand = #40 to #200.



LOG OF DIRECT PUSH BOREHOLE

DP6

Project Name: Proposed ZA-1 Potrero Switchyard

page 1 of 1

Location: Former MGP Gas Holder Yard, San Francisco, CA

Driller(s) John Rogie, California Push Technologies, Inc.	Probe Location East of existing concrete slab	Total Depth
Rig Geoprobe 6625	Proposed GIS building	12.0 feet
Hole Diameter 2.5-inch	Surface Asphalt	Water Depth
Soil Sampler Geoprobe Macro-core (MC) with catcher	Datum 12 feet AMSL	N/A
Water Sampler None	Water Samples None	Date
Backfill Neat cement	Logged by John Woodruff, PG&E	Mar-12-2014

Sampler	Recovery/ Drive (feet)	PID (ppm)	Sample Container	Sample ID	Depth (feet)	Sample	Soil Symbol (USCS)	DESCRIPTION <small>(soil type, color, moisture content, consistency, density, etc.)</small>
					0		A/C	ASPHALT AND BASEROCK: two inches, weak.
MC	1.4/ 4.0	N/A			2		SW	WELL GRADED SAND: dark brown to dark gray to black, dry, loose, some particles of angular lampblack. No chemical odor. Pushed easily. FILL.
MC	1.5/ 4.0	N/A	8-oz Jar	DP6	6			
MC	1.7/ 4.0	N/A			10	SC/ SW	CLAYEY SAND to WELL GRADED SAND: dark gray to black, dry, loose, some particles of angular lampblack. No chemical odor. Pushed easily. FILL.	
					12			Bottom of borehole at 12.0 feet.
					14			Groundwater was not encountered.
					16			Collected one composite sample as follows: placed approximately 2.5 to 3 ounces of soil from each Macro-core drive into a new, one-gallon zip top bag, mixed the soil, and transferred the soil into an 8-ounce sample jar.
					18			Borehole was grouted to surface with neat cement.
					20			

Soil Symbol Abbreviations: C=Clay or clayey, M=Silt or silty, O=Organic soil, L=Low plasticity, H=High plasticity, G=Gravel or gravelly, S=Sand or sandy, W=Well graded, P=Poorly graded.
Consistency Terms: very soft, soft, medium stiff, stiff, very stiff, and hard. **Apparent Density Terms:** very loose, loose, medium dense, dense, and very dense.
Soil Components: boulders = >12", cobbles = 12" to 3", coarse gravel = 3" to 3/4", fine gravel = 3/4" to #4, coarse sand = #4 to #10, medium sand = #10 to #40, fine sand = #40 to #200.



LOG OF DIRECT PUSH BOREHOLE

DP7

Project Name: Proposed ZA-1 Potrero Switchyard
Location: Former MGP Gas Holder Yard, San Francisco, CA

page 1 of 1

Driller(s) John Rogie, California Push Technologies, Inc.	Probe Location Gas holder concrete pad	Total Depth
Rig Geoprobe 6625	Proposed shunt reactors	12.0 feet
Hole Diameter 2.5-inch	Surface Asphalt	Water Depth
Soil Sampler Geoprobe Macro-core (MC) with catcher	Datum 13 feet AMSL	N/A
Water Sampler None	Water Samples None	Date
Backfill Neat cement	Logged by John Woodruff, PG&E	Mar-12-2014

Sampler	Recovery/ Drive (feet)	PID (ppm)	Sample Container	Sample ID	Depth (feet)	Sample	Soil Symbol (USCS)	DESCRIPTION (soil type, color, moisture content, consistency, density, etc.)
N/A	N/A	N/A	N/A	N/A	0		Concrete	CONCRETE: 24 inches, hard, strong. Concrete was cored by Vickers Concrete Sawing, Inc. with a 6-inch core barrel.
MC	1.0/ 2.0	N/A	8-oz Jar	DP7	2			WELL GRADED SAND: dark brown to dark gray to black, dry, very loose, some particles of angular lampblack. No chemical odor. Pushed very easily. FILL.
MC	1.2/ 4.0	N/A			4		SW	
MC	1.8/ 4.0	N/A			6			
MC	1.8/ 4.0	N/A			8		SP	
					10			POORLY GRADED SAND: dark gray to black, dry, loose, some particles of angular lampblack. Sand is fine-grained. Some reddish brown sand-sized particles of brick at the bottom of the 8-12 foot drive. No chemical odor. Pushed easily. FILL.
					12			Bottom of borehole at 12.0 feet.
					14			Groundwater was not encountered.
					16			Collected one composite sample as follows: placed approximately 2.5 to 3 ounces of soil from each Macro-core drive into a new, one-gallon zip top bag, mixed the soil, and transferred the soil into an 8-ounce sample jar.
					18			Borehole was grouted to surface with neat cement.
					20			

Soil Symbol Abbreviations: C=Clay or clayey, M=Silt or silty, O=Organic soil, L=Low plasticity, H=High plasticity, G=Gravel or gravelly, S=Sand or sandy, W=Well graded, P=Poorly graded.
Consistency Terms: very soft, soft, medium stiff, stiff, very stiff, and hard. **Apparent Density Terms:** very loose, loose, medium dense, dense, and very dense.
Soil Components: boulders = >12", cobbles = 12" to 3", coarse gravel = 3" to 3/4", fine gravel = 3/4" to #4, coarse sand = #4 to #10, medium sand = #10 to #40, fine sand = #40 to #200.



LOG OF DIRECT PUSH BOREHOLE

DP8

Project Name: Proposed ZA-1 Potrero Switchyard
Location: Former MGP Gas Holder Yard, San Francisco, CA

page 1 of 1

Driller(s) John Rogie, California Push Technologies, Inc.	Probe Location Gas holder concrete pad	Total Depth
Rig Geoprobe 6625	Proposed shunt reactors	12.0 feet
Hole Diameter 2.5-inch	Surface Asphalt	Water Depth
Soil Sampler Geoprobe Macro-core (MC) with catcher	Datum 13 feet AMSL	N/A
Water Sampler None	Water Samples None	Date
Backfill Neat cement	Logged by John Woodruff, PG&E	Mar-12-2014

Sampler	Recovery/ Drive (feet)	PID (ppm)	Sample Container	Sample ID	Depth (feet)	Sample	Soil Symbol (USCS)	DESCRIPTION (soil type, color, moisture content, consistency, density, etc.)
N/A	N/A	N/A	N/A	N/A	0		Concrete	CONCRETE: 24 inches, hard, strong. Concrete was cored by Vickers Concrete Sawing, Inc. with a 6-inch core barrel.
MC	0.8/ 2.0	N/A	8-oz Jar	DP8	2		SP	POORLY GRADED SAND: dark brown, dry, very loose, no lampblack particles. Sand is fine-grained. No chemical odor. Pushed very easily. FILL.
MC	1.4/ 4.0	N/A			4		SP	
MC	2.2/ 4.0	N/A			6		SP	WELL GRADED SAND: dark brown to dark gray to black, dry, loose, some particles of angular lampblack. No chemical odor. Pushed easily. FILL.
					10		BR	BEDROCK at 10 feet: serpentine, olive, severely weathered to a clayey sand, low hardness. No chemical odor.
					12			Bottom of borehole at 12.0 feet.
					14			Groundwater was not encountered.
					16			Collected one composite sample as follows: placed approximately 2.5 to 3 ounces of soil from each Macro-core drive into a new, one-gallon zip top bag, mixed the soil, and transferred the soil into an 8-ounce sample jar.
					18			Borehole was grouted to surface with neat cement.
					20			

Soil Symbol Abbreviations: C=Clay or clayey, M=Silt or silty, O=Organic soil, L=Low plasticity, H=High plasticity, G=Gravel or gravelly, S=Sand or sandy, W=Well graded, P=Poorly graded.
Consistency Terms: very soft, soft, medium stiff, stiff, very stiff, and hard. **Apparent Density Terms:** very loose, loose, medium dense, dense, and very dense.
Soil Components: boulders = >12", cobbles = 12" to 3", coarse gravel = 3" to 3/4", fine gravel = 3/4" to #4, coarse sand = #4 to #10, medium sand = #10 to #40, fine sand = #40 to #200.

**Table 1. Laboratory results of asbestos in soil samples
collected from March 12, 2014 Direct Push (DP) boreholes
Proposed PG&E ZA-1 Potrero Switchyard**

Qualitative asbestos (EPA 600/R-93/116)

	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8
Chrysotile	No	Yes	Yes	Yes	Yes	No	Yes	Yes

PLM analysis for asbestos (EPA 600/R-93/116 with CARB 435)

	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	Average
Chrysotile (%)	0	1.25	2.25	0.25	0.25	0	0	2.5	0.8125

NOTES

- 1 Laboratory results are from Torrent Laboratory Report 1403084 Rev 2, dated April 04, 2014.
- 2 Exceedances are shown in bold.

Table 1. Laboratory results of California Code of Regulations (CCR) 17 Metals in soil samples collected from March 12, 2014 Direct Push (DP) boreholes Proposed PG&E ZA-1 Potrero Switchyard

Total metals (mg/Kg)

	10xSTLC	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8
Chromium	50	17	140	520	87	110	12	15	330
Lead	50	100	30	150	24	230	36	280	17
Nickel	200	27	290	980	270	260	24	39	1000

WET metals (mg/L)

	STLC	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8
Chromium	5	*	0.69	2.0	0.27	0.72	*	*	2.7
Lead	5	0.91	<i>0.05</i>	4.5	0.05	7.8	<i>0.05</i>	20	0.05
Nickel	20	*	3.2	13	0.91	3.1	*	*	30

TCLP metals (mg/L)

	STLC	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8
Chromium	5	*	<i>0.02</i>	<i>0.02</i>	*	<i>0.02</i>	*	*	<i>0.02</i>
Lead	5	*	*	<i>0.05</i>	*	<i>0.05</i>	*	0.23	<i>0.05</i>
Nickel	20	*	*	*	*	*	*	*	1.1

ABBREVIATIONS

- STLC Soluble Threshold Limit Concentration
- WET Waste Extraction Test
- TCLP Toxicity Characteristic Leaching Procedure
- mg/Kg milligrams per kilogram
- mg/L milligrams per liter
- * Not tested

NOTES

- 1 Laboratory results are from Torrent Laboratory Report 1403084 Rev 3, dated April 22, 2014.
- 2 Only those metals with total concentrations that exceeded ten times their STLC are shown.
- 3 Detection limits for nondetects are shown italics.
- 4 Exceedances are shown in bold.

APPENDIX D – AIR MONITORING LOG SHEET



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

June 19, 2014

Pacific Gas and Electric Company-Air Permits
Attention: Randy Frazier
PO Box 7640
San Francisco, California 94120

Re: ADMP RIN # NOA-0092
Project: PG&E Embarcadero-Potrero Switchyard Project, San Francisco
Applicant: Pacific Gas and Electric Company (PG&E)

Dear Mr. Frazier,

This letter is in response to the Asbestos Dust Mitigation Plan ("ADMP") referenced above for the subject project submitted to the Bay Area Air Quality Management District ("District") by Yorke Engineering, LLC on behalf of the PG&E, pursuant to subsection (e)(2)(A) of the Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations, Section 93105, Title 17, California Code of Regulation ("Asbestos ATCM").

The reference identification number ("RIN") for this ADMP is **NOA-0092**; when making inquiries or filing record submittals regarding this ADMP, please refer to the RIN.

The District received the revised ADMP on June 19, 2014, and determined the ADMP meets the applicable criteria pursuant to subsection (e)(4) of the Asbestos ATCM, provided the Dust Mitigation Measures enumerated in the following subsections are adhered to throughout the duration of construction and/or grading activities at the project:

- 4.0 Asbestos Dust Mitigation Plan**
- A. Track-Out Prevention and Control Measures
 - B. Active Storage Piles
 - C. Disturbed Surface Area and Storage Piles that Will Remain Inactive for More than Seven (7) Days
 - D. Traffic On-Site on Unpaved Roads, Parking Lots and Staging Areas
 - E. Earth Moving Activities
 - F. Off-site Transport
 - G. Post-Construction Stabilization of Disturbed Areas

In addition, approval is subject to the requirements set forth below:

Air monitoring:

1. The District approves the proposed monitoring on condition that:
 - a. Air Monitoring be conducted in accordance with the Naturally-Occurring Asbestos ("NOA") ambient perimeter air monitoring protocols contained in the ADMP.
 - b. Transmission electron microscopy (TEM) air sample results shall be continuously compiled throughout the duration of ground disturbance activities at the project into a data spreadsheet and reported in units of total structures per cubic centimeter. The spreadsheet shall be submitted for

Letter to Randy Frazier
June 19, 2014
Page 2

District review once every two weeks. Submit the spreadsheet electronically to Compliance@baaqmd.gov (identifying the project RIN # in the Subject of each email).

- c. Standard Operating Procedures for sample collection, processing and shipping, as well as all calibration records for flow measuring devices, and records of the date and location of each monitor shall be available for inspection.

Startup notification:

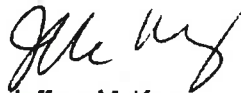
- The applicant shall submit electronic notification at least one week prior to beginning construction and/or grading activities at the project site to Compliance@baaqmd.gov (identifying the project RIN # in the Subject of email).

This ADMP is the basis for compliance with the Asbestos ATCM for the **PG&E Embarcadero-Potrero Switchyard, San Francisco Project**, and its terms must be implemented throughout the duration of the construction project. At the conclusion of the project, a letter stating the final date of work and detailing the post construction stabilization activities shall be submitted to Compliance and Enforcement at:

Director of Enforcement
939 Ellis St., San Francisco, CA 94109

Any questions you may have regarding this ADMP should be directed to Kevin Vo, Air Quality Specialist, at (415) 749-8620.

Sincerely,



Jeffrey McKay
Deputy Air Pollution Control Officer