

PACIFIC GAS AND ELECTRIC COMPANY
Embarcadero-Potrero 230 kV Transmission Project
NTP # 2 Horizontal Directional Drilling Submittal

APM or MM addressed:	APM AQ-3. Minimize Potential Naturally Occurring Asbestos (NOA) Emissions
Attachments:	A pdf of the BAAQMD approval with the approved Asbestos Dust Mitigation is attached
Date Submitted:	Aug 27 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, attached to this document which has been approved by the BAAQMD. That approval has also been included in this document.



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

August 20, 2014

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

Re: ADMP RIN # NOA-0096
Project: PG&E Embarcadero-Potrero Duct Bank and HDD Project
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-0096**; when making inquiries or filing record submittals regarding this ADMP, please refer to the RIN.

The District received the revised ADMP on August 15, 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
August 20, 2014
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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:

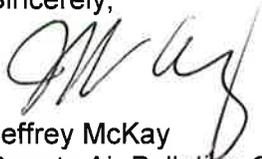
- The applicant shall submit electronic notification at least one week prior to beginning construction and/or grading activities at the project site to Compliance@baaqmd.gov (identifying the project RIN # in the Subject of email).

This ADMP is the basis for compliance with the Asbestos ATCM for the **PG&E Embarcadero-Potrero Duct Bank and HDD, 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

**Pacific Gas & Electric
Company**

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

August 2014

Prepared by:

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**Asbestos Dust Mitigation Plan
Embarcadero-Potrero Duct Bank &
Horizontal Directional Drilling**

**Asbestos Dust Mitigation Plan
for
Potrero Duct Bank and
Horizontal Directional Drilling
Project Site**

Prepared for:

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

August 2014

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Asbestos Dust Mitigation Plan for the Embarcadero-Potrero Duct Bank & Horizontal Directional Drilling Project 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 duct bank and horizontal directional drilling (HDD) project work on 23rd Street, between Illinois Street and the San Francisco Bay. This work is part of the work required for the Embarcadero-Potrero 230 kV Transmission Project. 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.

This portion of the project addresses the soil disturbance from the duct bank & HDD site work associated with the subterranean/submarine routing of the XLPE transmission cable along 23rd Street from Illinois Street to the bay adjacent to both the existing and new Potrero Switchyard sites. The southern HDD segment of the transmission line begins at the transition vault at the end of 23rd Street and proceeds east into the San Francisco Bay, approximately 1,000 feet beyond the shoreline.

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 of 0.75 percent, on average. The actual surface area of the planned excavation areas of disturbed soil are estimated to be more than 1 acre and, therefore in accordance with BAAQMD policy, an ADMP is required.

Site work will 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:	23rd Street; from Illinois Street to the San Francisco Bay, San Francisco, CA 94107
ADMP Prepared By	Randy Frazier/ rfrazier@Yorkeengr.com Craig Ullery/ Cullery@Yorkeengr.com
Company	Yorke Engineering, LLC
Phone	RF: (925) 560-1041 (office)/(925) 605-8471 (cell) CU: (415) 897-6203 (office)/(510) 853-1277 (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 general layout of the new 230 kV transmission line, and the location of the proposed duct bank/HDD project site.

Figure 2-1: Site Overview: New 230 kV Transmission Line Duct Bank/HDD Project Site

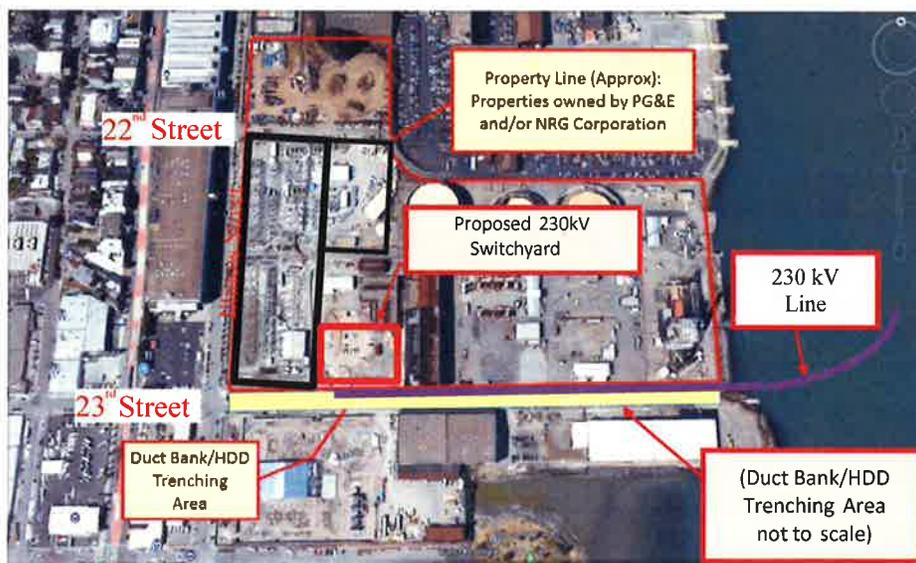
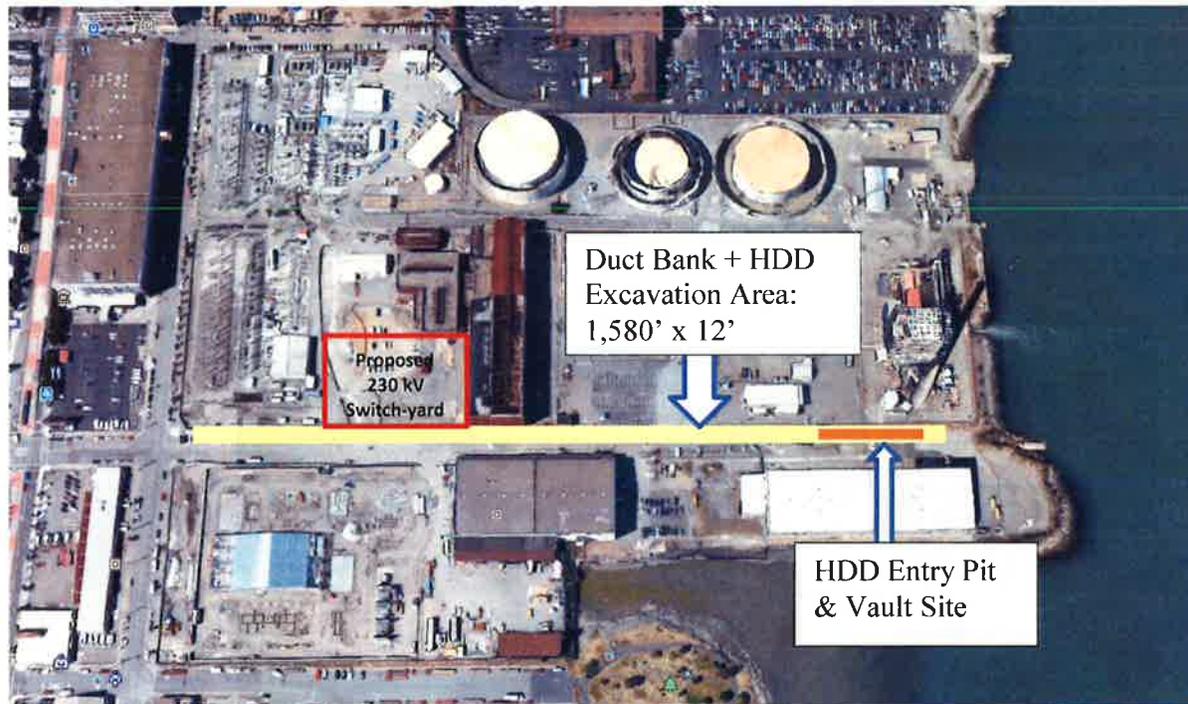


Figure 2-2 shows the specific project view along 23rd Street, with areas shaded yellow showing the location of the proposed duct bank excavation area as well as the HDD location shaded orange. The HDD will transition the transmission line from subterranean to submarine placement. The entry point for the HDD will be 154 feet from water's edge; there will be no excavation between the HDD entry point and the bay. Trenching work areas could extend approximately 1,500 feet in length by 12 feet wide with work crews excavating and securing the trench walls via shoring. Once the shoring process is complete for approximately 500 feet, another crew will install the duct bank, and the trench will be backfilled and pavement restored. Approximately 150 to 300 feet of trench is anticipated to be open at any one time. Staging and excavation for each vault will require approximately 1,500 square feet of work space and will be located alongside and to the north of 23rd Street. The entry pit for the HDD operations will be approximately 5 feet wide, 8 feet long, and 6 feet deep. A minimum of 11 feet depth (maximum depth TBD) will be excavated to accommodate 230 kV XLPE cable contained within 8 inch polyvinyl chloride (PVC) conduit and 10 inch high density polyethylene (HDPE) conduit. The PVC conduit will be encased with thermal concrete; the HDPE will be encased with fluidized thermal backfill.

The project is expected to commence in September 2014 and be completed by May 2015.

Figure 2-2: Potrero Switchyard Duct Bank & Horizontal Directional Drilling Location



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 “flat-lands” 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

PG&E conducted a soil boring event from April 25 to 29, 2014 to pre-characterize the soils for disposal during the trenching phase of this project along 23rd Street, shown in Appendix C. A total of thirteen (13) composite samples were collected from boring locations labelled A-1 through A-6 and B-1 through B-6. The lab results are included in Appendix C. The thirteen samples ranged from 0.0% to 2.5% asbestos, with an average asbestos level of 0.75%.

From this study, 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%.

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. Dust control and wet sweeping best management measures will be implemented during excavation.
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. There will be no unpaved areas utilized for roads, parking, or staging.

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.

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 there will be no unpaved areas utilized for roads, parking, or staging, and 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.

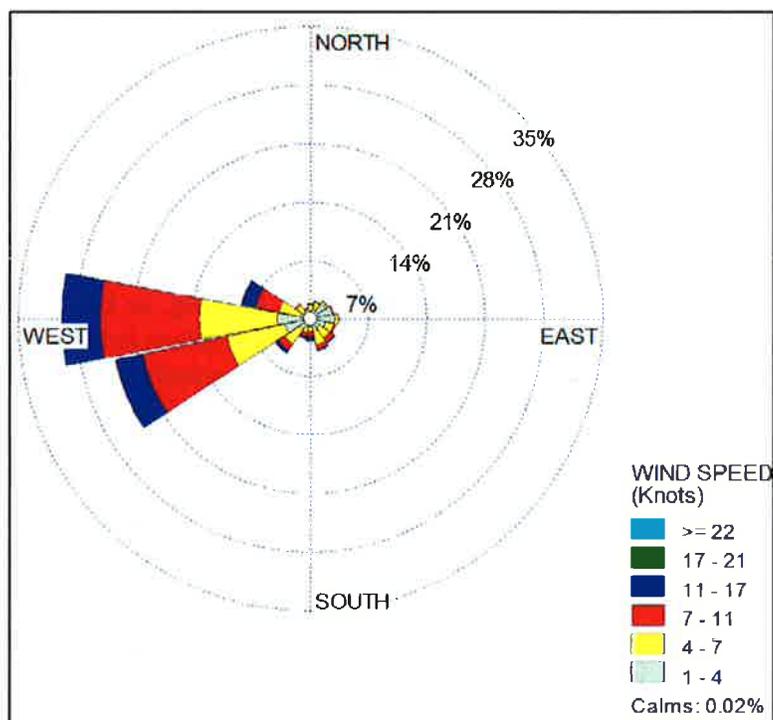
PG&E proposes to collect area background air samples during any active site work and to continue until the sooner of the date Bay Area Air Quality Management District allows cessation of monitoring activities or until allowed by Title 17 Section 93105 (e)(2)(G). Asbestos monitoring stations (AMS) will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

Approximate initial locations of the portable AMS' are shown in the Figures in Appendix B-3. Initially, the site excavation work is anticipated to be in the area of the HDD vault (near the east end of 23rd street) with the excavation pathway expected to progress in a westerly direction toward the duct bank from east to west. Due to the changing location of the site excavation, it will likely be necessary for the portable AMS' to be moved, from time to time, to ensure the air samples from the four main directions are from locations that surround the active work area. The potential active trench area, in total, is 23rd street from

Illinois Street to the Bay. The monitoring stations will be placed within the boundary of this construction area for security and sample integrity, and will be placed to capture representative samples of the air from the site, regardless of wind direction. In the event the AMS need to be moved to the north or south at a distance greater than 100 feet from the original north and south project boundaries (north side of 23rd Street and south side of 23rd Street), PG&E will obtain prior approval from BAAQMD. Approximate sample stations shown in the figure in Appendix B-3 are identified as AMS-1A (west 1), AMS-2A (north 2), AMS-3A (south 3), and AMS-4A (east 4).

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



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

For District Use Only	
Date Rec'd	8/5/14
File #	NOA-0096

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 Pacific Gas & Electric Company	Location Potrero Switching Station		
Address PO Box 7640	Address 23rd Street E of Illinois St		
City/State San Francisco	Zip 94120	City/State San Francisco	Zip 94107
Contact Craig Ullery		Start Date: August 2014	
Phone 415-897-6203	Fax 415-897-6232	Estimated Completion Date: September 2015	

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)	
<input type="checkbox"/> Road or Railway Construction <input type="checkbox"/> Road Maintenance <input type="checkbox"/> Housing Development <input type="checkbox"/> Commercial Property Development	<input checked="" type="checkbox"/> Trenching / Utilities Work <input type="checkbox"/> Other (please describe) Demo of existing/site clear <hr style="width: 100%;"/>

3. Detailed Site Information		
Areas and Facilities within a quarter mile (400 meters) of the Project: (Check all that applies)		
<input checked="" type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial <input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Rural	<input type="checkbox"/> Hospital / Nursing Home <input type="checkbox"/> School <input type="checkbox"/> Park / Playground	<input checked="" type="checkbox"/> Other (please describe) <hr style="width: 100%;"/> Potrero Hills Nursery School

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:

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

If available, please attach the following information:

- | |
|---|
| <input type="checkbox"/> Geologic Information |
| <input type="checkbox"/> Topographical Maps |
| <input type="checkbox"/> Meteorological Data |

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.

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)

PG&E will not be producing any inactive disturbed areas or storage piles but instead will be live loading of any excavated materials.

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)

PG&E will be enforcing a maximum site vehicle speed of 15 miles per hour.

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

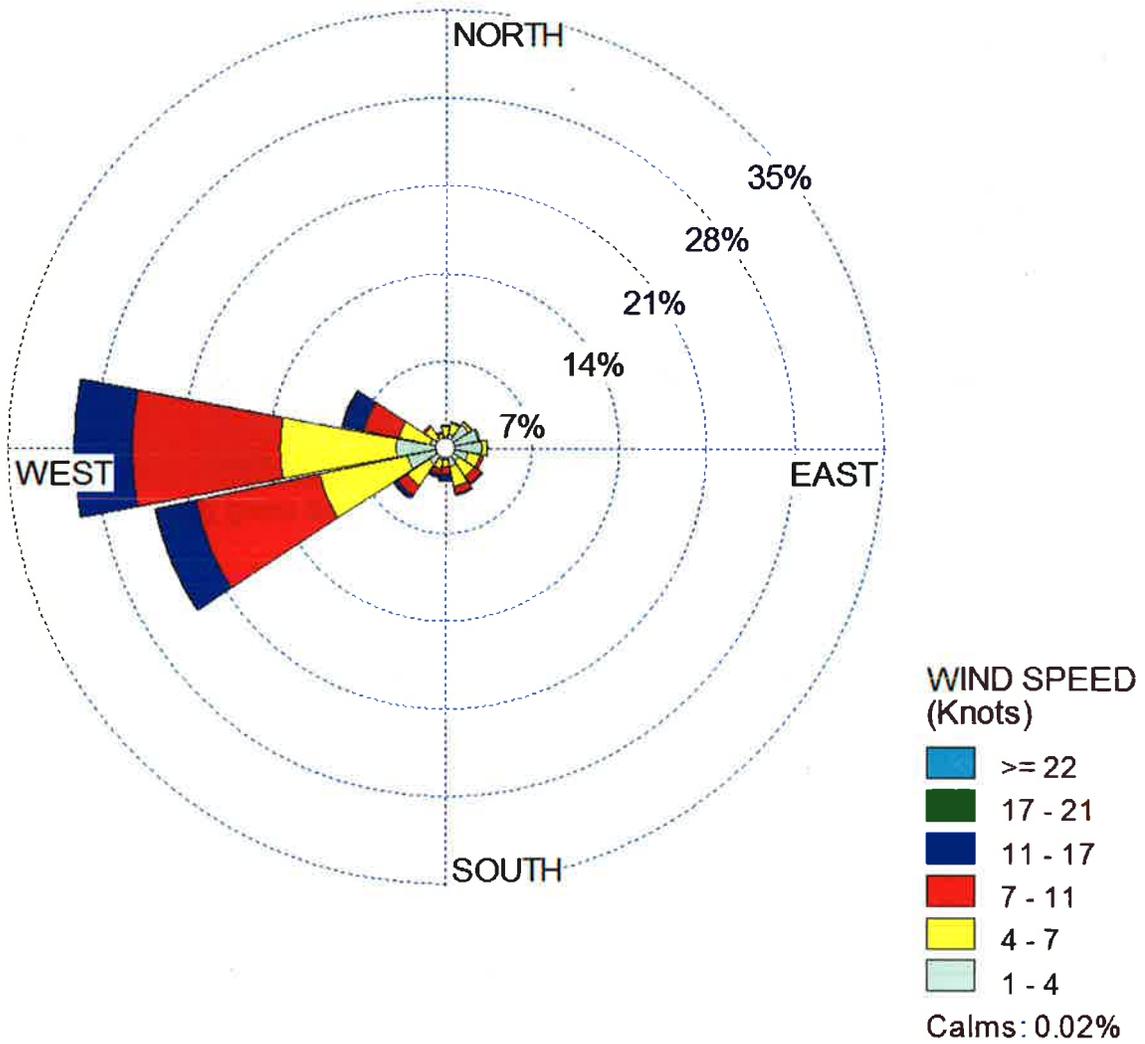
Please mark the box preceding each measure that will be implemented:

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 fifteen (15) miles per hour or greater from causing visible dust emissions. (Briefly describe below)

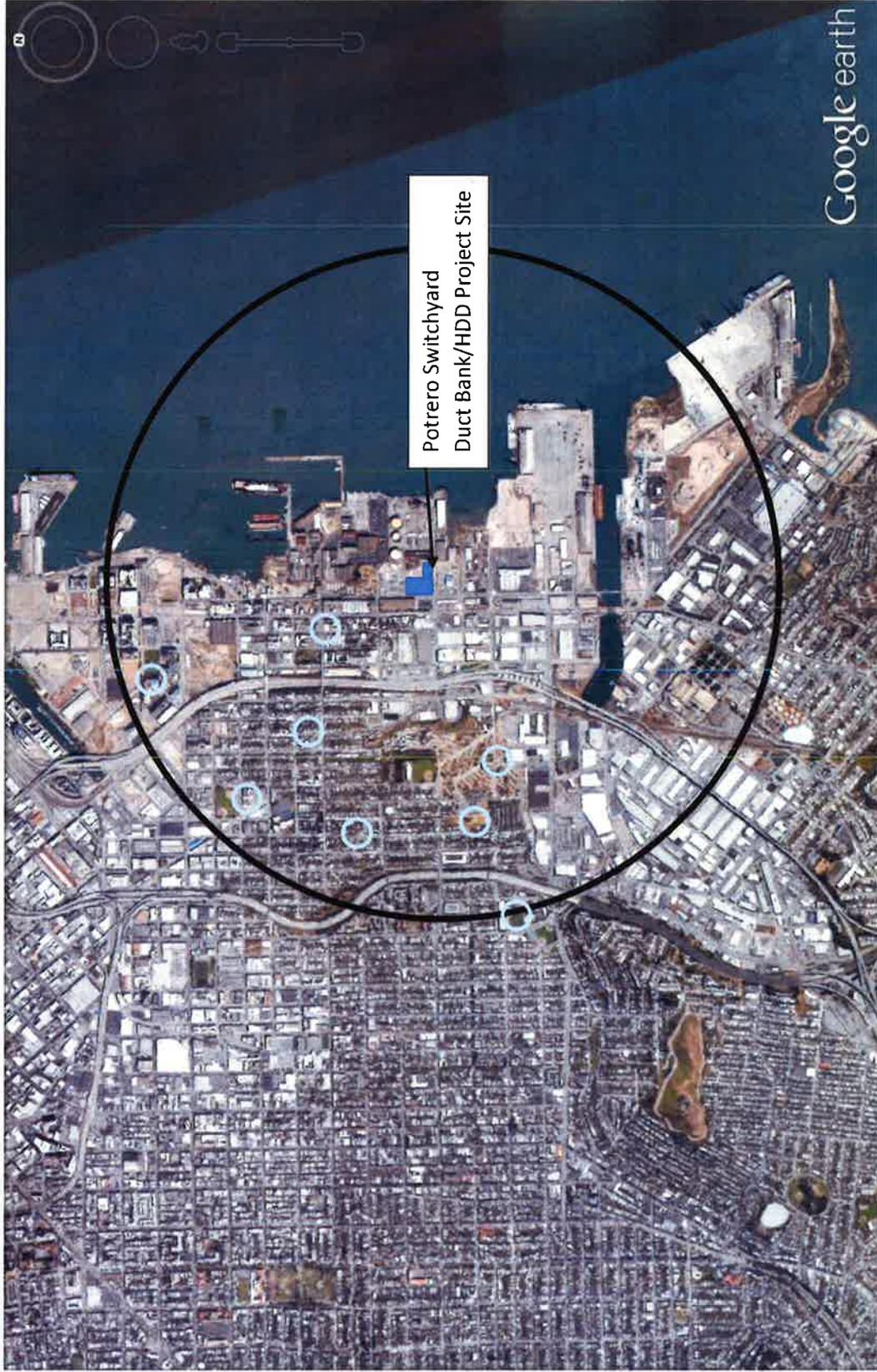
San Francisco Sewage Treatment Plant (STP) Windrose, 2005

SF STP is located approximately 0.75 mile Southwest of Potrero Site



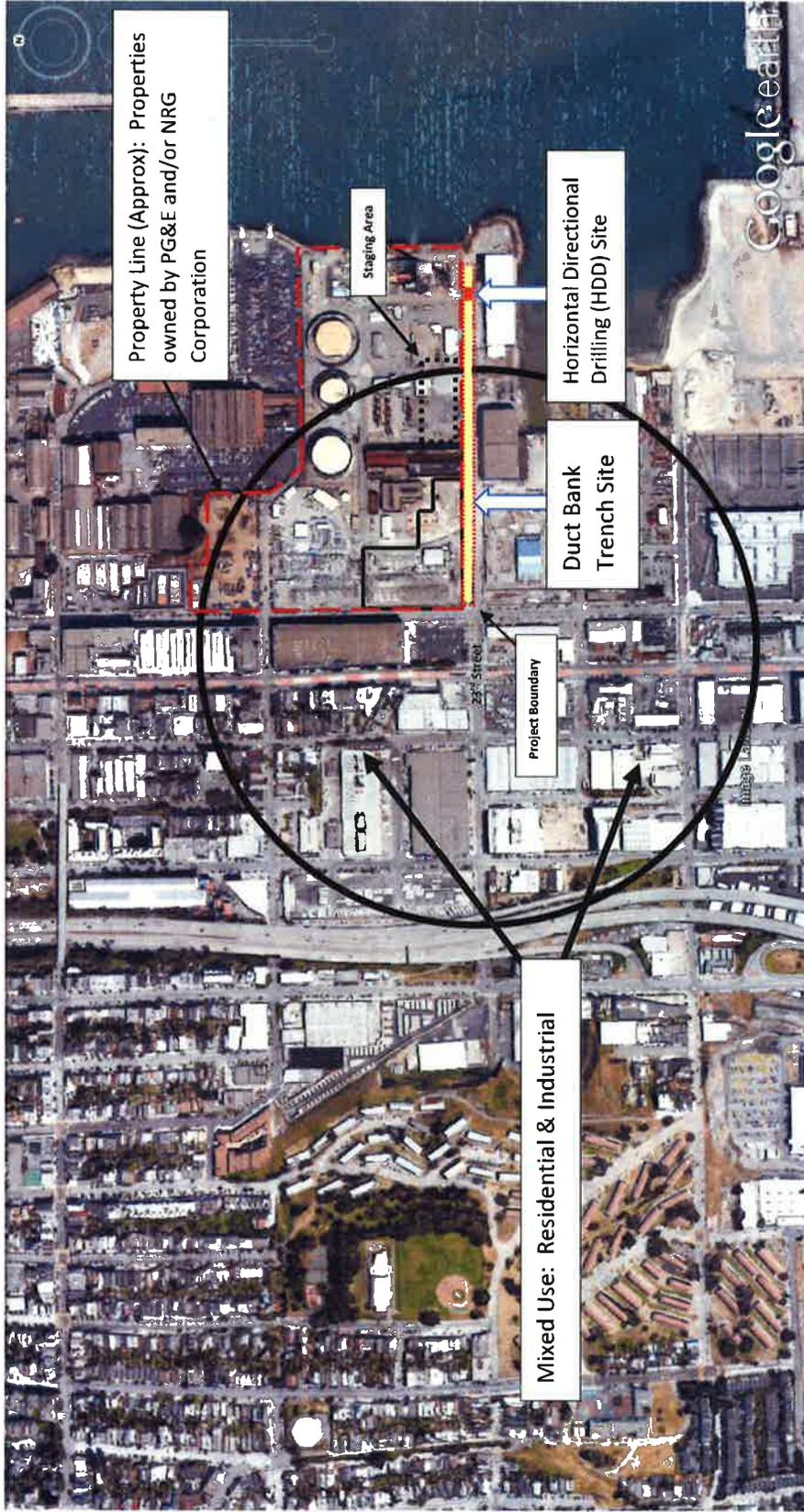
**APPENDIX B – PG&E: POTRERO DUCT BANK & HORIZONTAL
DIRECTIONAL DRILLING PROJECT SITE**

Appendix B-1: PG&E: Potrero Switchyard Duct Bank/HDD Construction Site: 1 Mile

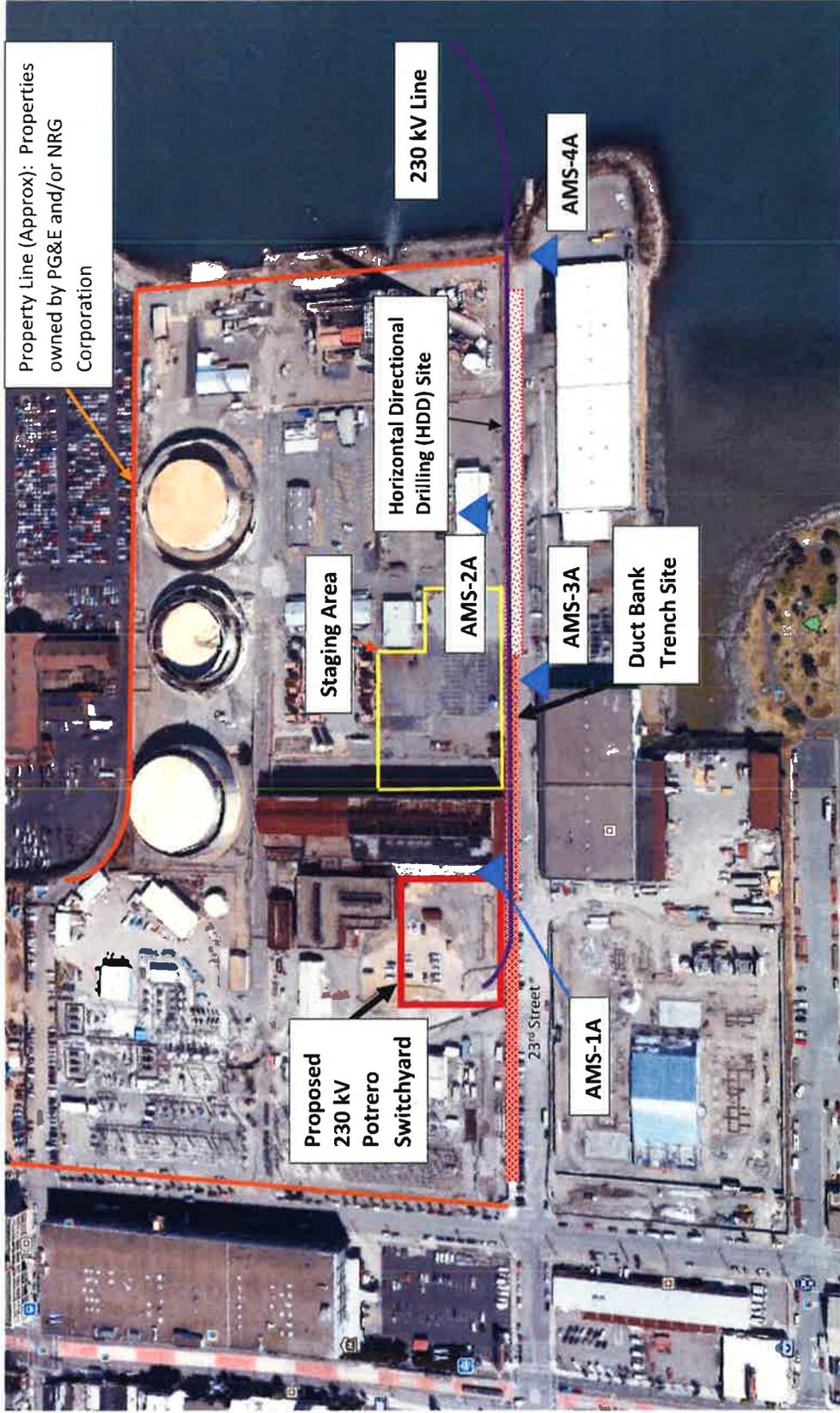


School Location

Appendix B-2 PG&E: Potrero Duct Bank & HDD Project Site: 400 Meter Radius Shown



Appendix B-3 PG&E: Potrero Duct Bank & HDD Project Site: Site Layout



**APPENDIX C – PG&E: POTRERO DUCT BANK & HDD PROJECT SITE
BORING RESULTS**



LEGEND

- Proposed potholing area
- Proposed transition vault
- Proposed pull vault
- Proposed HDD entrance locations

- Proposed underground 230kV electrical cable
- ▲ PG&E Hand auger boring (April 2014)
- AMEC Geotechnical boring (April 2014)
- Proposed environmental borehole

NOTES

1) Proposed locations are approximate and subject to change.

Drawing prepared by PG&E John Woodruff on May-20-2014.

Figure 1. Locations of hand auger and geotechnical borings on 23rd Street PG&E ZA-1 Embarcadero to Potrero 230 kV Cable Project

**Table 1 Laboratory results of naturally occurring asbestos in soil samples
collected from April 25-29, 2014 hand auger boreholes
Proposed PG&E ZA-1 Cable Along 23rd Street**

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

	A1	A2	A3	A4	A5	A6	B1	B2	B3	B4	B4 BM	B5	B6
Chrysotile	Yes	No	Yes	Yes									

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

	A1	A2	A3	A4	A5	A6	B1	B2	B3	B4	B4 BM	B5	B6	Average
Chrysotile (%)	0.50	0.50	0.25	0.75	0.25	0.75	0.50	1.00	0.75	0.25	0.00	2.25	2.00	0.75

NOTES

- 1 Laboratory results are from Torrent Laboratory Reports 1404211 Rev 1 dated April 30, 2014 and 1404244 Rev 3 dated May 14, 2014.

APPENDIX D – AIR MONITORING LOG SHEET

