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February 14, 2006
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04-AFC-1
DATE FEB 14 2006
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Mr. William Pfanner
Siting Project Manager
California Energy Commission
1516 Ninth Street, MS-15
Sacramento, CA 95814-5504

RE: Final Field Sampling Plan
San Francisco Electric Reliability Project (04-AFC-1)

Dear Bill:

On behalf of the City and County of San Francisco, please find attached one original and 12 copies of the Final Field Sampling Plan that incorporates comments received from the involved agencies on the draft final report.

Please call me if you have any questions.

Sincerely,

CH2M HILL

John L. Carrier, J.D.
Program Manager

cc: Project File
Proof of Service List

San Francisco Electric Reliability Project (SFERP) (04-AFC-1)

Final Field Sampling Plan

Submitted by

The City and County of San Francisco

February 14, 2006

CH2MHILL

Final Field Sampling Plan – SFERP Site

Purpose

This final Field Sampling Plan (FSP) addresses the field investigation to be performed by CH2M HILL on behalf of the City and County of San Francisco (the City or CCSF) at the proposed San Francisco Electric Reliability Project (SFERP) site, located in the Potrero District of the City of San Francisco, CA.

The purpose of the investigation described in this final FSP is to collect additional environmental samples to further characterize the vadose zone and shallow groundwater at the site. Sixteen (16) borings (see attached map) will be drilled in which soil, soil gas, and/or groundwater samples will be collected. The field investigation, sample analyses, and preparation of the subsequent summary report will be supervised by a State of California Professional Geologist.

The Field Sampling Plan is being developed to satisfy proposed California Energy Commission (CEC) Staff Condition of Certification (COC) WASTE-7. In addition to the investigation described in the FSP, the City is working with the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) to have the deed restriction and RMP/SMP currently applicable to the adjacent MUNI site) formally extended to the SFERP site. The City recognizes that results from FSP investigation may necessitate revisions to the deed restriction and RMP/SMP. The existing RMP/SMP for the MUNI site will be followed in carrying out this FSP. Moreover, the City will comply with San Francisco Health Code Article 22A and will provide a site characterization and remediation plan, if necessary, to the Department of Public Health for review.

Prior Human Health and Ecological Risk Assessments of the Western Pacific Area have concluded that there are no significant risks in light of existing and ongoing risk management practices. These Assessments are in the process of being reviewed by the agencies with jurisdiction. Nonetheless, in order to move the CEC process along in an expeditious manner, the City committed to update the previously performed Human Heath Risk Assessment by incorporating the analytical data resulting from this FSP, and, if appropriate, to prepare a Removal Action Plan, as described in the Revised Summary Work Plan Regarding Additional Site Characterization Activities, submitted by the City to the CEC on December 23, 2005.

In addition, as part of the field sampling described below, the City will collect groundwater samples for analysis by an independent state-certified laboratory. In order to address the concerns of CEC staff, the City will undertake a Tier 1 screening of the results from the groundwater sample analysis, applying the appropriate dilution factors, and in accordance with the February 2005 report by the SFBRWQCB: "Screening for Environmental Concerns at Sites with Contaminated Soils and Groundwater," Table B on page 80. The City will provide the results of this screening exercise to the SFBRWQCB for its information and guidance on further requirements for ecological protection.

Background

The proposed power plant site is located between Cesar Chavez Street and 25th Street, southeast of the corner of Michigan and 25th Street in the Potrero District of the City of San Francisco. Several previous investigations have been conducted in the project vicinity in support of a number of environmental assessments. Details of those previous investigations are summarized in the Final Human Health and Ecological Risk Assessment, Former Western Pacific Property, Port Site, San Francisco CA (Geomatrix, 2000). As summarized, TPH and metals contamination were identified as the primary contaminants of concern for the site. In late July/early August of 2005, as part of a geotechnical investigation of the proposed power plant site, 15 borings were drilled (see attached plate 2 provided by GTC). In eight of the borings, environmental soil samples were collected. Samples were analyzed for TPH-diesel, TPH-motor oil, and TPH-Bunker C oil, arsenic, lead, asbestos, and pH. The focus of the sampling was the top 10 feet of soil as this was determined to be the depth of disturbance during construction activities for the power plant. In addition to the depth-specific sampling that was conducted, composite soil samples were also collected to aid in profiling the spoils for offsite disposal. The results of the sampling are presented in the attached summary Table 1 and Table 2.

The results of July/August 2005 showed that TPH-D was present, but all reported detections were below 1,000 mg/kg. Bunker C oil was reported in all samples up to a maximum concentration of 20,000 mg/kg in the southern part of the site from boring SB-13. The highest concentrations of arsenic were reported from samples collected in the northern part of the site. At a depth of 5 feet, arsenic was reported at a concentration of 460 mg/kg from boring SB-3. Lead in soil was reported at a wide range of concentrations that are not atypical of San Francisco soils. Concentrations ranged from 0.2 mg/kg to 2,100 mg/kg, the highest from boring SB-4 at a depth of 10 feet. Asbestos was not widely reported and where reported was only at a "trace" amount. Erosion from local serpentine bedrock is the likely source of the trace detections.

The California Energy Commission and Regional Water Quality Control Board have worked with the City and County of San Francisco to develop this plan to address additional sampling and analysis required prior to construction to complete the site characterization.

Local Geology

The entire site is underlain by artificial fill (of unknown source) that was formerly submerged beneath the San Francisco Bay. The fill is composed of a mixture of crushed serpentine bedrock, building debris, sand, silty sand, and silt typical of the San Francisco Bay area. Groundwater beneath the site was encountered during summer 2005 at a depth of approximately 11 feet below ground surface (bgs). Groundwater flow is generally northeastward toward the San Francisco Bay to the east, although it is likely under tidal influence and, as such, flow direction could be variable.

Sampling and Laboratory Analysis Plan

Sixteen new borings (identified on attached Plate 2 as SB-16 through SB-31) are planned to be drilled for the purpose of obtaining additional environmental information. It is anticipated that drilling will be conducted with the use of direct-push technology to expedite drilling/sampling and to minimize investigation-derived waste.

Five borings (SB-16 through SB-20) will be drilled in the southern portion of the site to further characterize soil, soil gas, and groundwater. At these 5 borings, 3 discrete soil samples, 1 soil gas sample, and 1 groundwater sample will be collected for analysis. The first sample will be collected just below the surface at approximately 6-inches. (Note: a construction contractor has trailers and equipment staged in this area and has placed a liner and 4 inches of soil over the area - sampling will begin 3 inches below that liner). The surface soil will be scraped away using a decontaminated stainless steel trowel and then collected into the designated sample jars. Drilling will continue so that a second sample can be collected at a depth of approximately 5 feet, and a deeper sample will be collected at about 10 feet (just above the water table). A soil gas sample for VOCs by EPA Method TO-14 will be collected at a depth of approximately 5 feet. Drilling will continue into groundwater and a sample will be collected. In addition, one soil sample for Chlorinated Herbicides will be taken at the surface from among these locations.

In the central part of the site, seven borings will be drilled. At these 7 borings (SB-21 – SB-27), 3 discrete soil samples, 1 soil gas sample, and 1 groundwater sample will be collected for analysis. The first sample will be collected just below the surface at approximately 6-inches. The surface soil will be scraped away using a decontaminated stainless steel trowel and then collected into the designated sample jars. Drilling will continue so that a second sample can be collected at a depth of approximately 5 feet, and a deeper sample will be collected at about 10 feet (just above the water table). A soil gas sample for VOCs by EPA Method TO-14 will be collected at a depth of approximately 5 feet. Drilling will continue into groundwater and a sample will be collected. In addition, one soil sample for Chlorinated Herbicides will be taken at the surface from among these locations.

In the northern part of the site, 4 borings will be drilled (SB-28 – SB-31). At these 4 borings, 3 discrete soil samples, 1 soil gas sample, and 1 groundwater sample will be collected for analysis. The first sample will be collected just below the surface at approximately 6-inches. The surface soil will be scraped away using a decontaminated stainless steel trowel and then collected into the designated sample jars. Drilling will continue so that a second sample can be collected at a depth of approximately 5 feet, and a deeper sample will be collected at about 10 feet (just above the water table). A soil gas sample for VOCs by EPA Method TO-14 will be collected at a depth of approximately 5 feet. Drilling will continue into groundwater and a sample will be collected. In addition, two soil samples for Chlorinated Herbicides will be taken at the surface at SB28 and SB29.

The samples to be collected at each location, including method analyses, sample containers, etc., are shown on the attached Table 3.

The driller will provide soil from the designated depths from a decontaminated split-spoon sampler that will then be transferred to the sample jars (provided by the lab).

Samples will be submitted to a State of California-approved laboratory for analysis. Soil and groundwater samples will be analyzed for:

- Total Petroleum Hydrocarbons as diesel (TPH-D, M8015-E)
- TPH as motor oil (TPH-MO, M8015-E);
- TPH as "Bunker C" oil (TPH-Bunker, M8015-E)
- TPH as gasoline (TPH-G, M8015-P)
- PCBs (SW8082)
- Chlorinated Herbicides (SW8151[A])
- Volatile Organic Compounds (VOCs) (SW8260B)
- Semi-Volatile Organic Compounds (SVOCs) (SW8270C)
- Polynuclear Aromatic Hydrocarbons (PAHs, including naphthalene) (SW8310)
- CAM-17 metals (SW6000 and SW7000-series)
- asbestos (soil only)
- pH
- Soil vapor will be analyzed for VOCs (Method TO-14)

Laboratory reporting limits are included as attachment 1 to this FSP.

Standard Level III laboratory QA/QC procedures will be provided and will include summary quality control and raw data.

Turnaround time requested is 10 working days following receipt of samples.

Upon receipt of the laboratory analytical results, a brief summary report will be prepared that documents field activity, reported detections, and provides an evaluation of environmental conditions. This summary report will be provided within 30 days of receipt of analytical results to the San Francisco Bay Regional Water Quality Control Board, the CalEPA Department of Toxic Substances Control, the San Francisco Department of Public Health, and the California Energy Commission.

Field Procedures

Drilling/Waste Handling

Since the borings are relatively shallow and space may be limited, a direct-push type drill rig will likely be used for this effort. Only a minimal amount of waste is typically generated with this drilling method. Waste that is generated (cuttings, excess core, and decontamination fluids) will be placed in a drum(s) to be disposed of by the City. Only three or four drum volumes are anticipated to be generated.

Sample Handling

Each sample will handled in such a manner to ensure that the samples will arrive at the laboratory intact, at the proper temperature, and free of external contamination. Sample labels will be prepared for each sample container and will include the date, time of collection, sampler's initials, analyses requested, and any other pertinent information. This same information will be recorded on the chain of custody form, which will accompany the samples to the lab. Strict chain of custody procedures will be followed during any form of

storage or transport. All samples will be stored at 4 degrees Celsius or less. Prior to shipment to the laboratory (if not hand delivered), each sample cooler will be secured with strapping tape and custody seals.

Soil samples will be collected via direct push (macro coring) and be retrieved in approximate 4-foot lengths. The entire length of each boring will be cored so that a visual inspection of the lithology can be made and from which samples will be collected.

Soil gas samples will be collected via vacuum pump and Teflon tubing dedicated for each boring. DTSC guidelines for active Soil Gas Investigations (DTSC, 2003) will be followed during the collection of soil gas samples.

Groundwater samples will be collected via a peristaltic pump. For metals samples, filtering will be performed by the laboratory due to the likelihood that the groundwater will be turbid at the time of collection. Metals samples will be collected into unpreserved containers.

Decontamination

All equipment that may directly or indirectly contact samples will be decontaminated in a designated decontamination area. This includes casing, drill bits, auger flights, and sampling devices. In addition, the contractor will take care to prevent the sample from coming into contact with potentially contaminating substances such as tape, oil, engine exhaust, corroded surfaces, and dirt.

The following procedure will be used to decontaminate large pieces of equipment, such as casings, auger flights, pipe and rods, and those portions of the drill rig that may stand directly over a boring, a well location, or that come into contact with casing, auger flights, pipe, or rods. The external surfaces of equipment will be washed with high-pressure hot water and Alconox, or equivalent laboratory-grade detergent. If necessary, the external surfaces will be scrubbed until all visible dirt, grime, grease, oil, loose paint, and rust flakes have been removed. The equipment will then be rinsed with potable water. The inside surfaces of casing, drill rod, and auger flights will also be washed as described.

The following procedure will be used to decontaminate sampling and drilling devices that can be hand-manipulated such as split spoons, bailers, and augers: For sampling and smaller drilling devices, wash with potable water, scrub the equipment with a solution of potable water and Alconox, or equivalent laboratory-grade detergent, and then rinse with copious quantities of potable water. (If equipment has come in contact with oil or grease, rinse the equipment with pesticide-grade methanol followed by pesticide-grade hexane.)

Documentation

All field sampling activities will be recorded in a field logbook and on appropriate field forms. Information recorded in the log book will include, at a minimum, location, time on site, personnel and equipment present, visitors, materials used, samples collected (type and sample identifiers), measurements taken, and any other observations or information that would be necessary to reconstruct field activities at a later date.

Drilling Permits and Utility Clearance

Drilling permits will be obtained through the City and County of San Francisco prior to drilling. Underground Service Alert (USA) will be contacted a minimum of 72 hours prior to the initiation of drilling. As an additional precaution, CH2M HILL may contract a private utility-locating service to clear drilling locations in areas where utilities are suspected or known to exist.

Health and Safety

A project health and safety plan will be prepared for this field task. Details of the plan will be presented to all CH2M HILL field staff and subcontractors prior to the initiation of field activities.

References

Geomatrix, 2000. *Final Human Health and Ecological Risk Assessment, Former Western Pacific Property, Port Site, San Francisco CA*. Prepared for the Port of San Francisco.

State of California, Department of Toxic Substances Control (DTSC). 2003. Active Soil Gas Investigation, sampling guidelines.

Table 1
Environmental Soil Sampling Results
San Francisco Electric Reliability Project – Muni Power Plant Site
Dates Sampled - 07/22/05 to 08/02/05

Boring ID	Analysis (Method) (units) / Sample ID - Depth	TPH-D (M8015-E) (mg/kg)	TPH-MO (M8015-E) (mg/kg)	Bunker "C" Oil (M8015-E) (mg/kg)	Metals (Arsenic) (7000-series) (mg/kg)	Metals (Lead) (7000-series) (mg/kg)	Asbestos (PLM) (percentage)	pH	
SB-1	SB1-0	19 HY	63	180 Y	**5.5**	10	ND	12	**North Composite**
	SB1-5	7.5 HY	45	120 Y	**140**	14	Trace	9.7	
	SB1-10	11 HY	67	190 Y	**4.4**	0.2	Trace	8.8	
SB-2	SB2-0	96 HY	750	**1,600 Y**	**13**	73	ND	11.5	
	SB2-5	29 HY	110	260 Y	**7.6**	3.5	Trace	8.3	
	SB2-10	9 HY	50	110 Y	**10**	11	Trace	8.5	
SB-3	SB3-0	160 HY	750	**2,100 Y**	**6.2**	19	ND	11.6	
	SB3-5	210 HY	550	**1,700 Y**	**460**	670	ND	8.7	
	SB3-10	96 HY	330	950 Y	**140**	360	Trace	11	
SB-4	SB4-0	160 HY	**1,200**	**3,200 Y**	**5.8**	8.9	ND	11.3	
	SB4-5	94 HY	500	**1,300 Y**	**26**	47	ND	11.4	
	SB4-10	75 HY	500	**1,300 Y**	**22**	**2100**	ND	10	
SB-6	SB6-0	220 HY	**1,200**	**2,900 Y**	**8.5**	46	ND	11.6	**Central Composite**
	SB6-5	210 HY	**1,100**	**2,700 Y**	**7.5**	82	ND	11.8	
SB-7	SB7-0	680 HY	**4,300**	**9,300 Y**	**5.5**	230	Trace	8.8	
	SB7-3	98 HY	380	960 Y	**4**	53	ND	11.4	
SB-13	SB13-0	220 HY	850	**2,200 Y**	**7.1**	460	ND	8.9	**South Composite**
	SB13-3	340 HY	**9,300**	**20,000 Y**	**5**	280	ND	9	
SB-14	SB14-0	45 HY	160	470 Y	**4.8**	100	ND	11.8	
	SB14-3	19 HY	86	240 Y	**2.7**	70	ND	9	

Data Result qualifiers
H = Heavier hydrocarbons contributed to the quanitification
Y = Sample exhibited chromatographic pattern which does not resemble standard
Concentrations in bold exceed a screening level

TPH = 1,000 mg/kg (CA RWQCB ESL)
Arsenic = 0.25 mg/kg (Industrial use PRG)
Lead = 800 mg/kg (Industrial use PRG)

Samples analyzed by Curtis and Tompkins Laboratory, Berkeley CA.

Table 2

Investigation-Derived Waste Profiling, Composite Sampling Results
San Francisco Electric Reliability Project – Muni Power Plant Site
Dates Sampled - 07/22/05 to 08/02/05, 11/04/05

Analysis (Method)	North Comp	Central Comp	South Comp	Screening Levels
Total Extractable Hydrocarbons (mg/kg)				mg/kg
Diesel C10-C24	89 HY	720 HY	250 HY	1,000
Motor Oil C24-C36	440	**2,500**	**2,600**	1,000
Bunker C C12-40	970 Y	**6,300 Y**	**5,300 Y**	1,000
Polynuclear Aromatic Hydrocarbons (ug/kg)	**North Comp**	**Central Comp**	**South Comp**	**Screening Levels (ug/kg)**
Naphthalene	150	520	ND	4,200
Acenaphthylene	300	4,900	ND	NE
Acenaphthene	150	5,900	ND	29,000,000
Fluorene	30	9,000	15	26,000,000
Phenanthrene	180	57,000	200	NE
Anthracene	16	16,000	70	100,000,000
Fluoranthene	200	47,000	320	22,000,000
Pyrene	250	2,700	250	29,000,000
Benzo(a)anthracene	88	**17,000**	100	2,100
Chrysene	130	15,000	220	210,000
Benzo(b)fluoranthene	110	**6,700**	340	2,100
Benzo(k)fluoranthene	51	4,600	92	21,000
Benzo(a)pyrene	120	**14,000**	70	210
Dibenz(ah)anthracene	150	**12,000**	98	210
Benzo(ghi)perylene	230	14,000	470	NE
Indeno(123-cd)pyrene	97	**5,700**	110	2,100
1-Methylnaphthalene (UV)	75	104	75	NE
1-Methylnaphthalene (F)	83	129	78	NE
California Title 26 Metals - (TTLC) (mg/kg)	**North**	**Central**	**South**	**TTLC Limts (mg/kg)**
Antimony	3.1	ND	4.1	500
Arsenic	66	6.5	6.7	500
Barium	250	360	430	10,000
Beryllium	0.13	0.21	0.34	75
Cadmium	2.1	1.4	4.2	100
Chromium	120	270	81	2,500
Cobalt	26	25	22	8,000
Copper	140	83	260	2,500
Lead	280	460	550	1,000
Mercury	0.27	1.6	0.57	20
Molybdenum	1.9	ND	0.86	3,500
Nickel	310	350	89	2,000
Selenium	ND	ND	1.1	100
Silver	0.28	ND	0.2	500
Thallium	ND	ND	0.2	700
Vanadium	38	46	39	2,400
Zinc	280	320	780	5,000

Table 2
Investigation-Derived Waste Profiling, Composite Sampling Results
San Francisco Electric Reliability Project – Muni Power Plant Site
Dates Sampled - 07/22/05 to 08/02/05, 11/04/05

Analysis (Method)	North Comp	Central Comp	South Comp	Screening Levels
California Title 26 Metals - WET Leachate (STLC) (ug/L)	**North**	**Central**	**South**	**STLC Limits (ug/L)**
Antimony	ND	ND	ND	15,000
Arsenic	1,800	ND	ND	5,000
Barium	5,400	5,300	6,300	100,000
Beryllium	ND	ND	ND	750
Cadmium	ND	ND	250	1,000
Chromium	2,200	1,100	570	5,000
Cobalt	2,100	1,200	1,500	80,000
Copper	4,700	5,600	7,200	25,000
Lead	**14,000**	**28,000**	**33,000**	5,000
Mercury	ND	ND	ND	200
Molybdenum	ND	ND	ND	350,000
Nickel	20,000	4,200	1,700	20,000
Selenium	ND	ND	ND	1,000
Silver	ND	ND	ND	5,000
Thallium	ND	ND	ND	7,000
Vanadium	540	1,100	ND	24,000
Zinc	8,400	23,000	47,000	250,000
California Title 26 Metals - Leachate (TCLP) (ug/L)	**North**	**Central**	**South**	**TCLP Limits (ug/L)**
Antimony	ND	ND	ND	NE
Arsenic	ND	ND	ND	5,000
Barium	ND	ND	ND	100,000
Beryllium	ND	ND	ND	NE
Cadmium	ND	ND	ND	1,000
Chromium	ND	ND	ND	5,000
Cobalt	ND	ND	ND	NE
Copper	ND	250	630	NE
Lead	ND	97	170	5,000
Mercury	ND	ND	ND	200
Molybdenum	ND	ND	ND	NE
Nickel	ND	ND	ND	NE
Selenium	ND	ND	ND	1,000
Silver	ND	ND	ND	5,000
Thallium	ND	ND	ND	NE
Vanadium	ND	ND	ND	NE
Zinc	ND	1,800	2,000	NE
Misc.	**North**	**Central**	**South**	**Screening Levels**
pH	10.6	9.2	11.1	
Reactive Cyanide	ND	ND	ND	NE

Table 2

Investigation-Derived Waste Profiling, Composite Sampling Results
San Francisco Electric Reliability Project – Muni Power Plant Site
Dates Sampled - 07/22/05 to 08/02/05, 11/04/05

Analysis (Method)	North Comp	Central Comp	South Comp	Screening Levels
Reactive Sulfide	ND	ND	ND	NE
Asbestos	Trace	ND	ND	

Composite samples collected from drill cuttings from borings drilled in the northern, central and southern areas.
The "North Comp" collected from the cuttings from borings SB-1 through SB-4.
The "Central Comp" collected from the cuttings from borings SB-5 through SB-9.
The "South Comp" collected from the cuttings from borings SB-10 through SB-15.
Concentrations in bold exceed screening levels.
NE = Not Established
Data Result Qualifiers
H = Heavier hydrocarbons contributed to the quanitification
Y = Sample exhibited chromatographic pattern which does not resemble standard

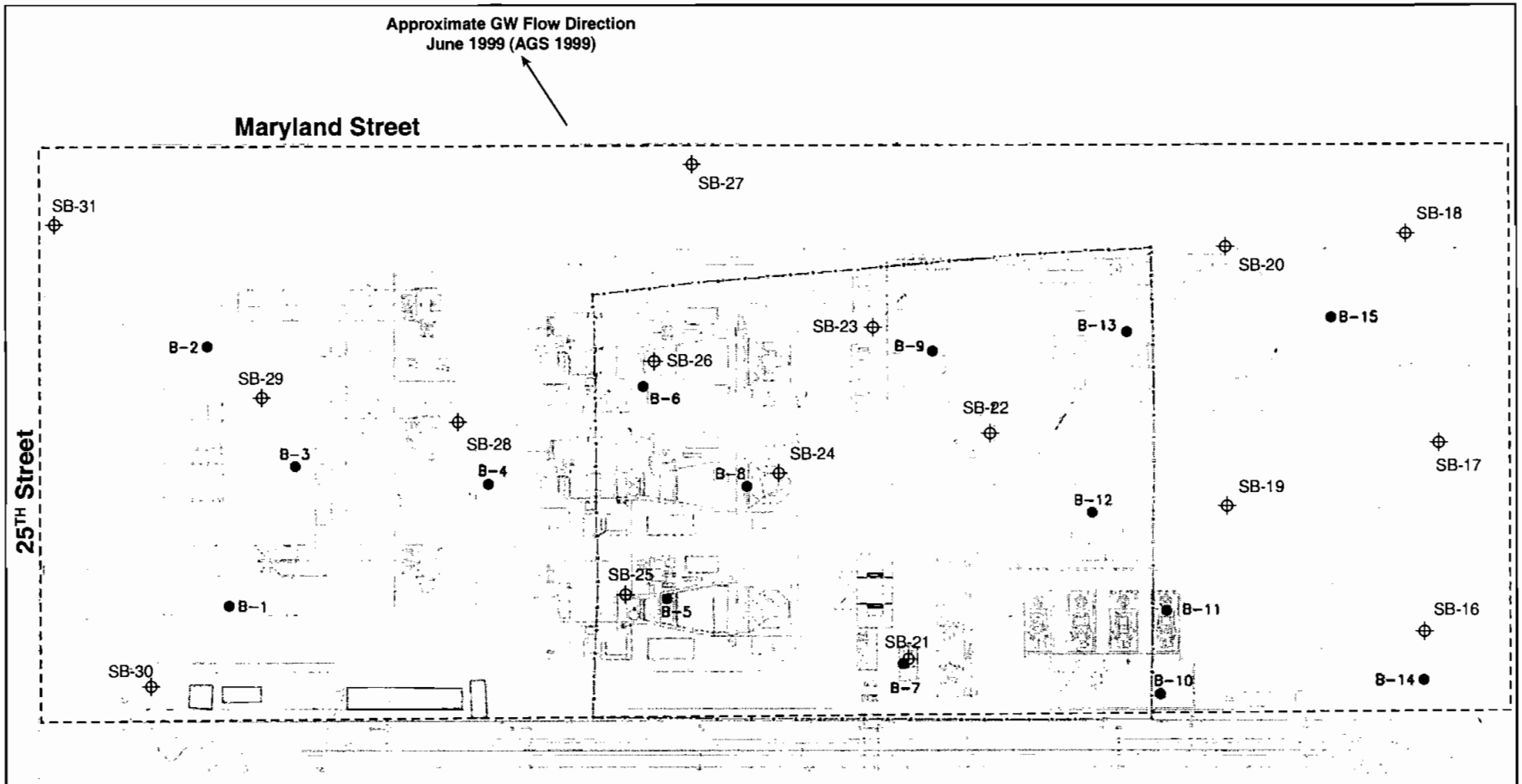
Samples analyzed by Curtis and Tompkins Laboratory, Berkeley CA.

Table 3
Field Sampling Table
San Francisco Electric Reliability Project – Muni Power Plant Site
Feb 2 2006

			Analysis (Method)	TPH-D (M8015-E)	TPH-MO (M8015-E)	TPH-Bunker "C" Oil (M8015-E)	TPH-G (M8015-P)	VOCs inc BTEX (SW8260B)	SVOCs (SW8270C)	PAHs (SW8310)	PCBs (SW8082)	Chlorinated Herbicides (SW8151A)	CAM-17 Metals	pH	Asbestos (soil only)	VOCs (TO-14) Soil gas)
Area	Boring ID	Sample ID (location snd depth)	Matrix													
South	SB-16	SB16-0	Soil	√	√	√	√		√	√	√		√	√	√	
		SB16-5	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB16-5	Soil Gas													√
		SB16-10	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB16-GW	Groundwater	√	√	√	√	√	√	√	√		√	√		
South	SB-17	SB17-0	Soil	√	√	√	√		√	√	√		√	√	√	
		SB17-5	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB17-5	Soil Gas													√
		SB17-10	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB17-GW	Groundwater	√	√	√	√	√	√	√	√		√	√		
South	SB-18	SB18-0	Soil	√	√	√	√		√	√	√		√	√	√	
		SB18-5	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB18-5	Soil Gas													√
		SB18-10	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB18-GW	Groundwater	√	√	√	√	√	√	√	√		√	√		
South	SB-19	SB19-0	Soil	√	√	√	√		√	√	√	√	√	√	√	
		SB19-5	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB19-5	Soil Gas													√
		SB19-10	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB19-GW	Groundwater	√	√	√	√	√	√	√	√		√	√		
South	SB-20	SB20-0	Soil	√	√	√	√		√	√	√		√	√	√	
		SB20-5	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB20-5	Soil Gas													√
		SB20-10	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB20-GW	Groundwater	√	√	√	√	√	√	√	√		√	√		
			South Totals =	**20**	**20**	**20**	**20**	**15**	**20**	**20**	**20**	**1**	**20**	**20**	**15**	**6**
Central	SB-21	SB21-0	Soil	√	√	√	√		√	√	√		√		√	
		SB21-5	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB21-5	Soil Gas													√
		SB21-10	Soil	√	√	√	√	√	√	√	√		√		√	
		SB21-GW	Groundwater	√	√	√	√	√	√	√	√		√	√		
Central	SB-22	SB22-0	Soil	√	√	√	√		√	√	√		√		√	
		SB22-5	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB22-5	Soil Gas													√
		SB22-10	Soil	√	√	√	√	√	√	√	√		√		√	
		SB22-GW	Groundwater	√	√	√	√	√	√	√	√		√	√		
Central	SB-23	SB23-0	Soil	√	√	√	√		√	√	√		√		√	
		SB23-5	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB23-5	Soil Gas													√
		SB23-10	Soil	√	√	√	√	√	√	√	√		√		√	
		SB23-GW	Groundwater	√	√	√	√	√	√	√	√		√	√		
Central	SB-24	SB24-0	Soil	√	√	√	√		√	√	√	√	√		√	
		SB24-5	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB24-5	Soil Gas													√
		SB24-10	Soil	√	√	√	√	√	√	√	√		√		√	
		SB24-GW	Groundwater	√	√	√	√	√	√	√	√		√	√		

Table 3
Field Sampling Table
San Francisco Electric Reliability Project – Muni Power Plant Site
Feb 2 2006

			Analysis (Method)	TPH-D (M8015-E)	TPH-MO (M8015-E)	TPH-Bunker "C" Oil (M8015-E)	TPH-G (M8015-P)	VOCs inc BTEX (SW8260B)	SVOCs (SW8270C)	PAHs (SW8310)	PCBs (SW8082)	Chlorinated Herbicides (SW8151A)	CAM-17 Metals	pH	Asbestos (soil only)	VOCs (TO-14) Soil gas)
Area	Boring ID	Sample ID (location and depth)	Matrix													
Central	SB-25	SB25-0	Soil	√	√	√	√		√	√	√		√		√	
		SB25-5	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB25-5	Soil Gas													√
		SB25-10	Soil	√	√	√	√	√	√	√	√		√		√	
		SB25-GW	Groundwater	√	√	√	√	√	√	√	√		√	√		
Central	SB-26	SB26-0	Soil	√	√	√	√		√	√	√		√		√	
		SB26-5	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB26-5	Soil Gas													√
		SB26-10	Soil	√	√	√	√	√	√	√	√		√		√	
		SB26-GW	Groundwater	√	√	√	√	√	√	√	√		√	√		
North	SB-27	SB27-0	Soil	√	√	√	√		√	√	√		√		√	
		SB27-5	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB27-5	Soil Gas													√
		SB27-10	Soil	√	√	√	√	√	√	√	√		√		√	
		SB27-GW	Groundwater	√	√	√	√	√	√	√	√		√	√		
			Central Totals =	**28**	**28**	**28**	**28**	**21**	**28**	**28**	**28**	**1**	**28**	**14**	**21**	**7**
North	SB-28	SB28-0	Soil	√	√	√	√		√	√	√	√	√		√	
		SB28-5	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB28-5	Soil Gas													√
		SB28-10	Soil	√	√	√	√	√	√	√	√		√		√	
		SB28-GW	Groundwater	√	√	√	√	√	√	√	√		√	√		
North	SB-29	SB29-0	Soil	√	√	√	√		√	√	√	√	√		√	
		SB29-5	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB29-5	Soil Gas													√
		SB29-10	Soil	√	√	√	√	√	√	√	√		√		√	
		SB29-GW	Groundwater	√	√	√	√	√	√	√	√	√	√	√		
North	SB-30	SB30-0	Soil	√	√	√	√		√	√	√		√		√	
		SB30-5	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB30-5	Soil Gas													√
		SB30-10	Soil	√	√	√	√	√	√	√	√		√		√	
		SB30-GW	Groundwater	√	√	√	√	√	√	√	√		√	√		
North	SB-31	SB31-0	Soil	√	√	√	√		√	√	√		√		√	
		SB31-5	Soil	√	√	√	√	√	√	√	√		√	√	√	
		SB31-5	Soil Gas													√
		SB31-10	Soil	√	√	√	√	√	√	√	√		√		√	
		SB31-GW	Groundwater	√	√	√	√	√	√	√	√		√	√		
			North Totals =	**16**	**16**	**16**	**16**	**12**	**16**	**16**	**16**	**3**	**16**	**8**	**12**	**4**
			Total Samples =	**64**	**64**	**64**	**64**	**48**	**64**	**64**	**64**	**5**	**64**	**42**	**48**	**17**



LEGEND:

B-8 ● Borings by: GTC, July - August 2005

SB-16 ⊕ Proposed February/March 2006 Soil Borings

Approximate Site Boundary

NOTE:

Base Map provided by BP POWER, Inc.
Reference: "MUNI SITE–PLOT PLAN–3 UNITS SIMPLE CYCLE",
SFERP, San Francisco, California
DRAWING NO. C1, Preliminary Issue

*Approximate Locations – Not To Scale

N

600' 300' 0 600' 1200'

SCALE: 1" = 600'

GEOTECHNICAL CONSULTANTS, INC.
500 Sansome Street, Suite 402
San Francisco, CA 94111

Field Exploration Map	PLATE 2
Muni Site	Sept. 2005
SFPUC ERP Power Plant	SF05019

ES012006018SAC sample_locations2.ai 02/02/06 dash

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ELECTRONIC PROOF OF SERVICE LIST
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SAN FRANCISCO ELECTRIC RELIABILITY PROJECT
APPLICATION FOR CERTIFICATION,
DOCKET NO. 04-AFC-1

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I declare that I transmitted the foregoing document via e-mail, or as indicated by first class postal mail, to the above named on the date indicated thereby. I declare under penalty of perjury that the foregoing is true and correct.

Anar Bhimani
CH2M HILL