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October 26, 2005
184288

DOCKET 04-AFC-1
DATE OCT 26 2005
RECD OCT 27 2005

Mr. William Pfanner
Siting Project Manager
California Energy Commission
1516 Ninth Street, MS-15
Sacramento, CA 95814-5504

RE: Informal Data Response, Set 6D - ADDENDUM
San Francisco Electric Reliability Project (04-AFC-1)

Dear Bill:

On behalf of the City of San Francisco, please find attached 12 copies and one original of Informal Data Response, Set 6D - ADDENDUM.

On October 14, 2005, Table 2 was inadvertently left out of the sampling data provided in Informal Data Response, Set 6D. This addendum provides the sampling report and both Table 1 and 2.

Please call me if you have any questions.

Sincerely,

CH2M HILL

John L. Carrier, J.D.
Program Manager

c: Project File
Proof of Service List

**SAN FRANCISCO ELECTRIC
RELIABILITY PROJECT
(04-AFC-1)**

**INFORMAL DATA RESPONSE,
SET 6D - ADDENDUM**

**(Responses to: Informal Data Response Set 6, Sarvey Data Request Set
1A, and Preliminary Staff Assessment Soil and Water)**

Submitted by
CITY AND COUNTY OF SAN FRANCISCO

October 26, 2005



2485 Natomas Park Drive, Suite 600
Sacramento, California 95833-2937

**SAN FRANCISCO ELECTRIC RELIABILITY PROJECT
(04-AFC-01)
Informal Data Request Set 6D - ADDENDUM**

Technical Area: Soil and Water

REQUEST

Informal Data Request Set 6 (S&W 6-10): Please provide sample analysis results for soil borings performed on the new SFERP site.

Sarvey Set 1A (1-18): Please provide an analysis of soil samples and investigate the presence of asbestos contamination of the site.

Preliminary Staff Assessment (Conclusions p. 4.9-33): In order to complete the FSA, staff requires the following items to be submitted: Results from the soil and groundwater sampling compliant with the requirement for soil sampling and analysis of Article 22A of the San Francisco Public Health Code.

Response: Table 2 was inadvertently left out of Attachment S&W 6-10 on the October 14, 2005 submittal of Informal Data Request Set 6D. The revised summary report for this Attachment including Table 2 has been provided.

San Francisco Electric Reliability Project (SFERP)

PREPARED FOR: John Carrier
PREPARED BY: Dina Calanchini, Tom Lae
DATE: August 31, 2005

Summary of shallow environmental soil assessment at proposed SFPUC Muni Power Plant Site (Supplemental SFERP)

Introduction/Purpose

A geotechnical investigation to support the design of the power plant was conducted at the Muni Power Plant site 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. Fifteen soil borings that ranged in depth from 30 to 150 feet (see attached figure) were drilled with environmental soil samples for laboratory analyses being collected from 8 of the 15 soil borings. The purpose of the investigation was to collect a limited number of samples at multiple depths in the borings (focusing on the top 5 to 10 feet) to determine the presence and concentrations of potential contaminants that may pose a risk to future onsite workers. In addition, composite soil samples were also collected from the drill cuttings to aid in waste disposal characterization. The results of the geotechnical investigation will be reported under separate cover.

Results

Environmental soil samples were analyzed for total petroleum hydrocarbons as diesel (TPH-D), TPH as motor oil (TPH-MO), TPH as oil (TPH-Bunker), arsenic, lead, asbestos and pH levels, and the results are presented on Table 1. This analytical suite was selected based on the findings of an environmental assessment conducted on the adjacent MUNI Maintenance Facility parcel located immediately west of the site. It was assumed that the concentrations and types of contamination present would be similar at both sites. Curtis & Tompkins Ltd, Berkeley (a State-certified laboratory) conducted all laboratory analysis and reporting. The composite samples were analyzed for TPH-D, TPH-MO, TPH-Bunker, metals, polynuclear aromatic hydrocarbons (PAHs), reactive cyanide, reactive sulfide, asbestos and pH. Composite sample results are presented on Table 2. TPH concentrations were screened against the California Regional Water Quality Control Board (RWQCB) Environmental Screening Level (ESL) of 1,000 milligrams per kilogram (mg/kg) for soil at sites where groundwater is not a current or potential source of drinking water (RWQCB, 2005). This screening level is for the protection of the environment (e.g., surface water and groundwater). A screening level for TPH for the protection of human health has not been established. Metal and PAH concentrations were screened against the USEPA Region 9 Preliminary Remediation Goals (PRGs), October 2004, for industrial use soils (U.S. EPA, 2004).

Several contaminants were reported in soil samples that may pose a risk to future onsite workers. Arsenic was reported at concentrations exceeding the industrial use PRG in every soil and composite sample collected from the site. Lead was reported at a concentration exceeding the industrial use PRG in one soil sample from soil boring SB-4 at 10 feet below ground surface (bgs). Five PAHs were reported at concentrations greater than the industrial use PRG from the composite sample collected from the central portion of the site.

High concentrations (greater than 1,000 mg/kg) of TPH were reported in samples collected throughout the site in surface and subsurface samples. TPH-MO was reported at concentrations exceeding the 1,000 mg/kg ESL in 5 out of 20 soil samples up to 9,300 mg/kg. TPH-Bunker (oil) exceeded the 1,000 mg/kg ESL in 11 out of 20 soil samples up to 20,000 mg/kg.

Asbestos was reported at trace levels in 6 out of 20 soil samples. Reactive cyanide and reactive sulfide were not reported. These contaminants (asbestos and reactive cyanide) do not appear to pose a risk to on-site workers.

References

California Regional Water Quality Control Board (RWQCB), 2005. Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater. Interim Final. February.

U.S. EPA, 2004. Preliminary Remediation Goals. Region IX. October.

Table 1

Environmental Soil Sampling Results

San Francisco Electric Reliability Project – Muni Power Plant Site

Dates Sampled - 07/22/05 to 08/02/05

	Analysis (Method) (units)	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	
Boring ID	Sample ID - Depth								
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 quantification****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

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)				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 (mg/kg)				mg/kg
Antimony	3.1	ND	4.1	410
Arsenic	66	6.5	6.7	0.25
Barium	250	360	430	67,000
Beryllium	0.13	0.21	0.34	1,900
Cadmium	2.1	1.4	4.2	450
Chromium	120	270	81	450
Cobalt	26	25	22	1,900
Copper	140	83	260	11,000
Lead	280	460	550	800
Mercury	0.27	1.6	0.57	310
Molybdenum	1.9	ND	0.86	5,100
Nickel	310	350	89	20,000
Selenium	ND	ND	1.1	5,100
Silver	0.28	ND	0.2	5,100
Thallium	ND	ND	0.2	67
Vanadium	38	46	39	1,000
Zinc	280	320	780	100,000

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

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

Y = Sample exhibited chromatographic pattern which does not resemble standard

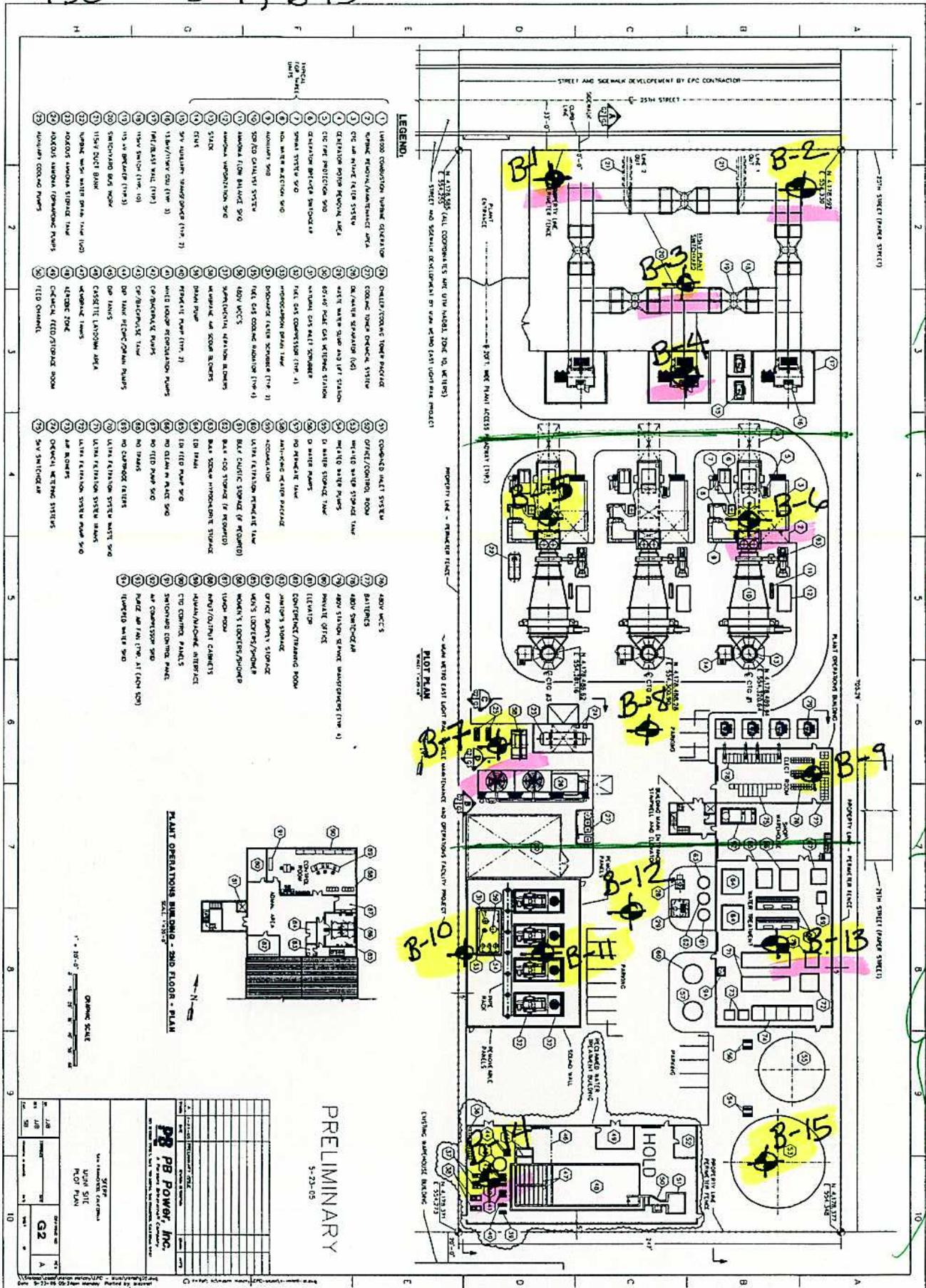
Samples analyzed by Curtis and Tompkins Laboratory, Berkeley CA

100' : B-1, B-2, B-5, B-6, B-7, B-9, B-11, B-14
 30' : B-3, B-8, B-10, B-12, B-13
 150' : B-4, B-15

North

Central

South



- LEGEND**
- 1 LUMINOUS CONDITION TURNING OPERATOR
 - 2 WARMUP ROOM/MAINTENANCE AREA
 - 3 CFC AIR PURGE FILTER SYSTEM
 - 4 DECONTAMINATION ROOM
 - 5 CFC AIR PURGE SYSTEM
 - 6 DECONTAMINATION ROOM
 - 7 CFC AIR PURGE SYSTEM
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PRELIMINARY
5-23-05

PG & B Power, Inc.

SCALE: 1/8" = 1'-0"

DATE: 5/23/05

PROJECT: B-1, B-2, B-5, B-6, B-7, B-9, B-11, B-14, B-3, B-8, B-10, B-12, B-13, B-4, B-15

SCALE: 1/8" = 1'-0"

DATE: 5/23/05

PROJECT: B-1, B-2, B-5, B-6, B-7, B-9, B-11, B-14, B-3, B-8, B-10, B-12, B-13, B-4, B-15