City of Oakland
Public Works Agency
Environmental Services Division

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(510) 238-7695
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FAX TRANSMISSION COVER SHEET

Date: July 31, 1998

To: Alameda County Health Care Services

Attn: Barney Chan

Fax: 337-9335

From: Mark Hersh

Subject: MSC Fuel Pipeline Removal

YOU SHOULD RECEIVE 7 PAGE(S) INCLUDING THIS COVER SHEET. IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL (510) 283-7695.

Remarks:

Dear Barney:

As we discussed yesterday in our meeting, this fax transmits a [redacted] July 9, 1998 Workplan for the fuel pipeline removal prepared by our consultant, Cambria Environmental Technology. As you are aware, we would like to conduct the boring program on Monday, August 3, 1998, so that we can get analytical results before the pipeline excavation begins the following week. As such, your timely review and comment on the addendum is appreciated.

Please call me at 238-7695, if you have any questions or require additional information.

Thank you.

Mark

CAMBRIA

July 31, 1998

Mr. Mark Hersh
City of Oakland -Public Works Agency
Environmental Services - Dalziel Building
250 Frank H. Ogawa Plaza, Suite 5301
Oakland CA 94612
Via FAX: (510) 238-7286

Re: **Soil Pre-classification Sampling Plan**
July 9, 1998, Fuel Distribution System-
Piping Removal Workplan Addendum
City of Oakland Municipal Service Center
7101 Edgewater Drive
Oakland, California 94621

Dear Mr. Hersh:

Cambria Environmental Technology, Inc. (Cambria) is pleased to present this addendum to a July, 9, 1998, Fuel Distribution System Piping Removal Workplan completed by the City of Oakland (City). This addendum describes a soil pre-classification sampling plan for the upcoming hydrant piping removal project and includes the recommendations requested by Mr. Barney Chan of Alameda County Health Care Services (ACHCS) during a July 29, 1998 meeting with ACHCS, the City, and Cambria. We have presented below a sampling plan and attached a figure indicating the proposed soil boring locations.

SAMPLING PLAN

Background: The City of Oakland (City) plans to remove approximately 2,450 lineal ft of gasoline and diesel piping in August 1998 from the site referenced above (Figure 1). The overburden soils must be characterized prior to returning the soil to the trench as backfill. Pre-characterization of the overburden soils will enable the City to anticipate the volume of overburden soil that will need to be off-hauled. The City plans to excavate and off-haul a maximum of approximately 850 cubic yards of Class II, III soil during the piping removal. The City will be able to off-haul substantially less than 850 cubic yards of soil if Class I disposal is required. Because of this constraint, we need

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to know the volume of overburden that will require removal from the site prior to the piping removal. If less than 850 cubic yards of overburden are removed and off-hauled, then additional soil up to a total of 850 cubic yards will be excavated from areas containing the highest hydrocarbon concentrations.

Sampling Locations: Cambria will collect 2 samples for every 50 cubic yards of overburden soil generated and composite the two samples into one for analysis. The overburden volume can be calculated as follows: (2,450 ft of piping) x (1.5 ft by 2.5 ft trench) equals about 362 cubic yards of soil, in situ. Therefore, we will collect 18 soil samples and run 9, 2-point composite analyses. This equates to one sample for every 153 lineal ft of piping. We will also collect samples from beneath the piping at select locations to determine the vertical extent of detected contamination, and the soil stratigraphy. Sampling locations are shown on the attached figure.

1 spl every 20' & comp. every 2 for analysis

Laboratory Analyses: Each 2-point composite will be analyzed at an offsite analytic laboratory for total petroleum hydrocarbons as gasoline (TPHg), TPHdiesel (TPHd), benzene, ethylbenzene, toluene, and xylenes (BETX). Two of the samples will also be analyzed for total lead to ensure landfill acceptance. the other 7 (9-2) sples should be run for organic lead.

Check if MTBE should be included (yes)

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Mark Hersh
July 31, 1998

Target Concentrations: Cambria proposes using the California Regional Water Quality Control Board - San Francisco Bay Region, San Francisco International Airport (SFO), Migration Management Zone 1 Tier 1 Standards to assess whether overburden should be off-hauled or returned to the trench as back fill. These standards were derived considering ecological risk and are appropriate for screening the overburden soil because both SFO and the subject site are situated adjacent to a saltwater habitat. Overburden containing hydrocarbons in excess of the thresholds described below will be disposed at an appropriate facility, while overburden that meets this criteria will be returned to the trench as backfill. The recommended standards are as follows:

SFO Migration Management Zone 1 Tier 1 - Thresholds			
Analyte	**Threshold (mg/kg)**	SPZ	FPZ
TPHg	112	16	16
TPHd	480	68	68
Benzene	too high (47)	2.7	.013
Ethylbenzene	89	5	2916
Toluene	2,800	2700	573
Xylenes	990	990	990

this zone should be min of 300' from water

Piping Removal Sampling: Cambria will collect confirmation samples from beneath the product piping at the areas that our field personnel deem to have the highest likelihood for historical leakage such as pipe fittings and the dispensing hydrant locations. The spacing will not exceed one sample for every 20 lineal ft of piping, and samples will be composited into 2- point composite analyses. During the piping removal, Cambria will also screen the soil every 10 ft and in areas of obvious hydrocarbon contamination to assess the best locations for over excavation. Our recommended procedures for the over excavation are described in the July 9, 1998 City of Oakland Workplan.

CAMBRIA

Mark Hersh
July 31, 1998

CLOSING

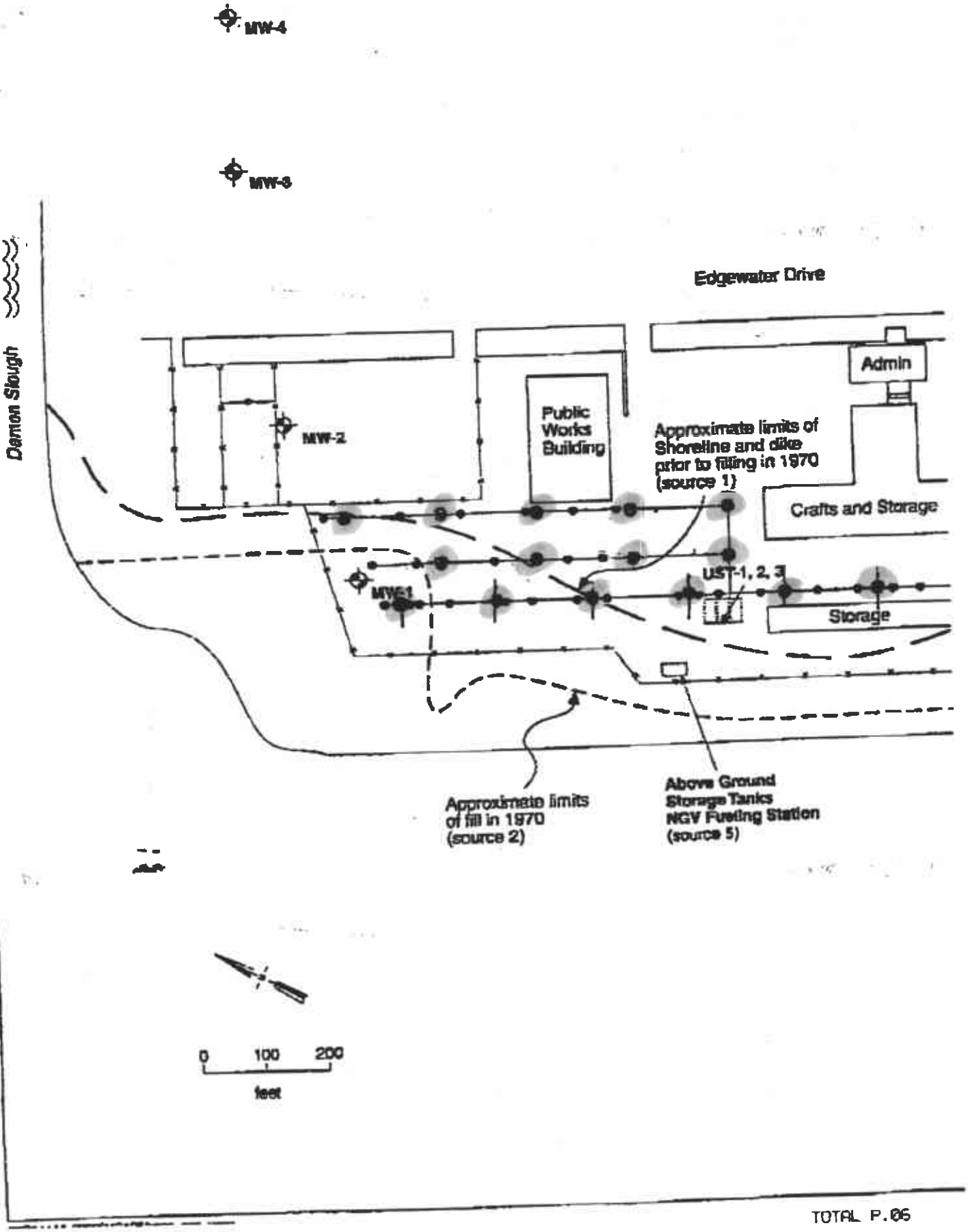
Cambria appreciates providing consulting services to the City of Oakland. Please contact me at (510) 420-3307 if you have any questions or comments.

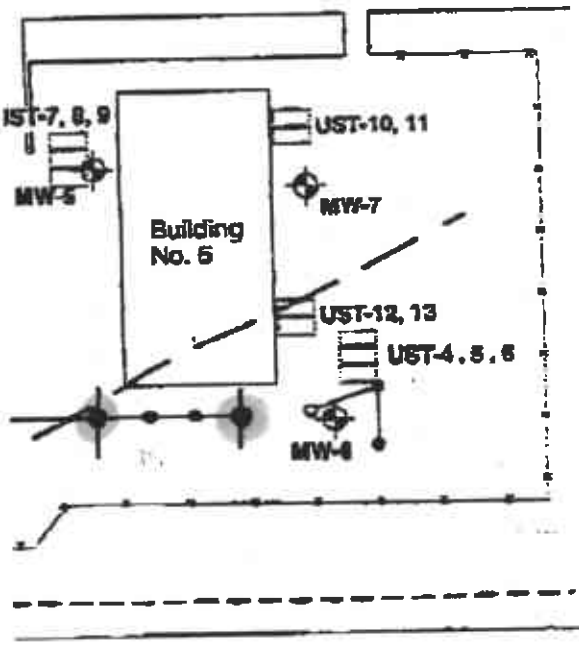
Sincerely,
Cambria Environmental Technology, Inc.

David Elias

David Elias, RG
Senior Geologist

H:\City of Oakland\MSC\preclassampling.wpd


MW-4
MW-3
Edgewater Drive
Damon Slough
Admin
Public Works Building
MW-2
Approximate limits of Shoreline and dike prior to filling in 1970 (source 1)
Crafts and Storage
MW-1
UST-1, 2, 3
Storage
Approximate limits of fill in 1970 (source 2)
Above Ground Storage Tanks NGV Fueling Station (source 5)
0
100
200
feet



LEGEND

MW-1 Approximate Monitoring Well Location

Valve Box
PROPOSED SAMPLE LOCATION
Fueling Stations and Pipeline

Approximate UST Location (Sources: 3 and 4)

UST 1	5,000-gallon Diesel
UST 2	5,000-gallon Leaded Gasoline
UST 3	5,000-gallon Unleaded Gasoline
UST 4	6,000-gallon Unknown contents
UST 5	Unknown Volume and Contents
UST 6	12,000-gallon Unleaded Gasoline
UST 7	12,000-gallon Leaded Gasoline
UST 8	20,000-gallon Unleaded Gasoline
UST 9	20,000-gallon Diesel
UST 10	1,000-gallon Lube Oil
UST 11	500-gallon Waste Oil
UST 12	1,000-gallon Lube Oil
UST 13	500-gallon Waste Oil
UST 14	500-gallon Waste Latex and Joint Sealer (location unknown)

Sources:

1. Site Plan, Oakland Operations Center, 6/28/57
2. Survey No. 7786. Service Center Site, 1/23/70
3. Fig. 3 Preliminary GeoTech/ESA WCC 1992
4. Kaiser Engineers Site Plan & Legend Schedule
5. A-2 Site Improvement Plan--City of Oakland, NGV Fueling Station

Elevations based on City of Oakland Benchmark "BM 26 NE 6 sidewalk SW area bridge south of Hegster. E=8.48 (used for surface settlement only)."

Project No. 92C0414A	City of Oakland Municipal Service Center	OVERBURDEN SAMPLING LOCATION MAP	Figure 1