CERES Associates

Environmental Assessment and Remediation Services

Facsimile Transmission

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TO: Larry Seto

Company: Alameda County Departement of Environmental Health

Fax Number: 510-337-9335

FROM: Mary Holland-Ford

Date: November 25, 1998

Pages: 5

CERES Associates Project: CA268-4

Please review this Workplan for drilling scheduled at 2855 Mandella Parkway, Oakland for Monday, November 30, 1998. I found out this morning from OES that they are not the lead agency for this project, because the Mandela Parkway street name was still listed on your databases as Cypress Street.. Client is very anxious for this environmental assessment to proceed. Please call myself or Nick Patz immediately. Thank you for your assistance in this matter.

Mary C. Holland-Ford

CERES Associates

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November 23, 1998
Proposal CA268P4

Larry Seto
Alameda County Health Care Services Agency
Department of Environmental Health
Environmental Protection Division
1131 Harbor Bay Parkway, Room 250
Alameda, California 94502

WORK PLAN
ADDITIONAL PHASE II ENVIRONMENTAL SITE ASSESSMENT
SOIL AND GROUNDWATER SAMPLING
2855 Mandela Parkway
Oakland, California

Dear Mr. Seto:

CERES Associates is pleased to forward this Work Plan to the City of Oakland Fire Department Office of Emergency Services, to conduct an additional Phase II Environmental Site Assessment (ESA) at 2855 Mandela Parkway, Oakland, Oakland County, California (Property).

BACKGROUND INFORMATION

In April 1998, CERES Associates conducted an Environmental Site Assessment Transaction Screen (ESATS) at the Property. During the course of the ESATS it was noted that two environmental investigations had been previously performed at the Property in conjunction with the removal of a 350-gallon and a 200-gallon underground storage tanks (USTs). Samples of soil and groundwater were analyzed in the report and found to contain significant concentrations of gasoline and its constituents. In addition, current and former historical activities at the Property indicated the potential for use of chlorinated solvents.

In August 1998, CERES Associates conducted soil vapor, soil, and groundwater sampling at the Property. The soil vapor sampling was a screening assessment primarily used to evaluate if chlorinated solvents may have impacted subsurface soil. Vapor samples were collected at various available subsurface locations throughout the Property. Significant concentrations of chlorinated solvents were not found during the soil vapor survey. The majority of soil and groundwater sampling was conducted to assess subsurface conditions in the area of the two former USTs.

Soil and groundwater sample laboratory analyses revealed that elevated concentrations of total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) were present in the area. Groundwater flow direction was calculated as flowing toward the west-northwest at a gradient of approximately 0.021.

Based on the results of the August 1998 assessment, CERES Associates conducted an additional assessment at the Property in October and November 1998. As part of that assessment CERES Associates 1) reviewed historical aerial photographs of the area to find if surface features indicative of USTs in other areas of the Property or offsite were notable, 2) conducted a geophysical survey on the southeast portion of the Property and in Willow Street to possibly identify the locations of current or former USTs, 3) conduct a regulatory review to find USTs in the near vicinity of the Property, and 4) drill 8 direct-push soil borings to find if soil and groundwater had been affected by gasoline from an onsite or offsite source.

During the November 1998 environmental assessment CERES Associates did not find indications of USTs on 13 sets of stereoscopic aerial photographs that we reviewed. We did observe that the present building was constructed between 1930 and 1947, and that Willow Street was not yet constructed in 1947. The geophysical survey did not find current USTs or their former locations. Because there was significant subsurface interference to the geophysical instrumentation along the sidewalk, CERES Associates instructed the drilling company to drill 9 borings through this area to find a possible UST, however the borings did not encounter obstructions to 5 feet below ground surface in each location. During the agency records review, CERES Associates found that a UST had been abandoned in place in a down gradient location from the Property at a site directly across Willow Street from the Property. The top of the UST was uncovered during the closure. Holes were drilled in the UST. Soil and groundwater samples collected from either end of the tank did not reveal significant concentrations of soil and/or groundwater contamination. Of the eight soil borings installed four were found to contain gasoline floating on the groundwater surface. The two borings installed in Willow Street, between the Property and the adjacent site with the abandoned UST were both found to contain at least 3 feet of gasoline floating on the groundwater surface.

ASSESSMENT ACTIVITIES

CERES Associates recommends conducting the following general assessment activities, which will be supervised by a State of California Registered Geologist

- ☐ Preparation of a Health and Safety Plan
- ☐ Drilling five soil borings
- ☐ Collection of soil and groundwater samples
- ☐ Analyses of soil and groundwater samples
- ☐ Preparation of report

SCOPE OF WORK

HEALTH AND SAFETY PLAN

A site-specific Health and Safety Plan (HASP) will be prepared by CERES Associates prior to commencing field operations. The HASP will address known or potential health and safety hazards that may be present at the Property, and possible precautions to avoid personal injury from the hazards. The HASP will include a map of the Property area with a direct route to the nearest emergency medical facility. CERES Associates will conduct worker's Health and Safety meetings prior to the commencement of each day's scheduled field activities.

FIELD ACTIVITIES

The area of this assessment has been previously marked for Underground Services Alert, and has been the subject of a geophysical survey to find subsurface encumbrances.

A total of five soil borings will be drilled using direct-push sampling equipment to an anticipated total depth of 20 feet below ground surface (refer to Figure 1 - attached). Three of the borings will be drilled near the east edge of Willow Street in the near vicinity of a former underground storage tank (UST). These borings will be drilled in order to assess the potential that the UST may have been the source of groundwater contamination on the Property. One boring will be drilled in the space occupied by Poser Envelope to help characterize the northern limits of groundwater contamination, and one boring will be drilled just south of the chain link fence near the Joiner Structure space to help assess the southern limits of groundwater contamination.

Soil samples will be collected from each boring at depths of 5, 10 and 15 feet below ground surface. A temporary PVC well casing will be set in each open borehole for the purpose of collecting a groundwater sample.

Soil samples will be collected in 1½-inch diameter polypropylene tubes. The sample tubes will be driven into undisturbed soil, the ends of the tubes will be covered with Teflon® sheeting and sealed with plastic caps. The sample tubes will be labeled with unique identification information and stored in a chest cooled with ice, for delivery to McCampbell Analytical Laboratories, Pacheco, California a state certified chemical analytical laboratory.

At each soil sampling interval, soil will be monitored according to a head-space method using a Mini-Rae® photoionization detector (PID). The PID records total volatile organic carbons in parts per million. This information will be put on soil boring logs for reference.

Groundwater samples will be collected from each boring by placing a temporary ¾-inch diameter PVC well casing in the open boring and allowing groundwater to flow into the casing. Groundwater will be extracted from the temporary casing using a clean disposable bailer, and placed into a laboratory cleaned glass container. The container will be labeled with unique identification

information, placed in a Ziplock® bag and then into a chest cooled with ice to approximately 4° Celsius for delivery to the State certified analytical laboratory.

CERES Associates will follow chain-of-custody protocol during sampling and sample delivery.

Waste and Backfill

Excess soil from sampling activities will be turned over to the laboratory for proper disposal. Each boring will be backfilled with neat cement within approximately 4-inches below ground surface. The top of the boring will then be filled with a material similar to that surrounding the boring (soil, cement, asphalt, etc.).

LABORATORY ANALYSES

CERES Associates proposes to analyze the soil samples collected from 10 and 15 feet below ground surface in each of the five soil borings for the following:

- Total petroleum hydrocarbons as gasoline (TPHg) using U.S. EPA modified method 8015
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) using U.S. EPA method 8020

MTBE - Patz said this would perform this test.

and the groundwater samples for the following (if floating product is present groundwater samples will not be analyzed):

- Total petroleum hydrocarbon as gasoline (TPHg) using U.S. EPA modified method 8015
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) using U.S. EPA method 602

The remaining soil samples will be held by the laboratory in case additional analyses are requested.

REPORT

The report will contain an explanation of the assessment activities and the results of each activity. In addition, the report will contain a section that summarizes the appropriate data and makes recommendations for conducting or not conducting further work. The appendices of the report will contain a Boring Location Map, logs of soil borings, tables of the results of analyses, and laboratory analytical reports. Reports will be delivered to the client and the Local Oversight Program as required.

Sincerely
CERES Associates

Nicholas A. Patz, REA 00066
President

TABLE ONE

Summary of Chemical Analysis of **Stockpiled Soil** Samples

TPH-G, TPH-D, BTEX, and MTBE

All results are in **parts per million**

SAMPLE NAME	TPH GAS	TPH DIESEL	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	MTBE
STKP-A (1-4)	<1.0	62	<0.005	<0.005	<0.005	<0.005	<0.005
STKP-A (5-8)	<1.0	28	<0.005	0.055	0.026	0.066	0.012
STKP-B (1-4)	<1.0	220	<0.005	<0.005	<0.005	<0.005	<0.005
STKP-B (5-8)	<1.0	280	<0.005	<0.005	<0.005	<0.005	<0.005
EPA METHOD	8015M	8015M	8020	8020	8020	8020	8020

NOTES:

Detectable concentrations are in **bold**.

Non-detectable concentrations are noted by the less than sign (<) followed by the laboratory detection limit.

TABLE TWO

Summary of Chemical Analysis of **Stockpiled Soil** Samples

Total Lead

All results are in parts per million

SAMPLE NAME	TOTAL LEAD
STKP-A (1-4)	33
STKP-A (5-8)	< 5
STKP-B (1-4)	110
STKP-B (5-8)	< 5
RESIDENTIAL PRG	130
EPA METHOD	7420

NOTES:

Detectable concentrations are in **bold**.

Non-detectable concentrations are noted by the less than sign (<) followed by the laboratory reporting limit.

PRG stands for Prelininary Remediation Goalfrom the US EPA Region IX.

APPENDIX A
ANALYTICAL REPORT

CHROMALAB, INC.

Environmental Services (SDB)

November 19, 1998 *Submission #:* 9811197

AQUA SCIENCE ENGINEERS INC

Attn: Dave Allen

Project: OLYMPIC SERVICE STATION *Project#:* 4306
Received: November 12, 1998

re: One sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: STKP-A(1-4)
Spl#: 215465 *Matrix:* SOIL
Sampled: November 11, 1998 *Run#:*16067 *Analyzed:* November 19, 1998

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	1.0	N.D.	99	1
MTBE	N.D.	0.0050	N.D.	78	1
BENZENE	N.D.	0.0050	N.D.	94	1
TOLUENE	N.D.	0.0050	N.D.	93	1
ETHYL BENZENE	N.D.	0.0050	N.D.	93	1
XYLENES	N.D.	0.0050	N.D.	92	1

Note: Hydrocarbon found in Gasoline Range is uncharacteristic of Gasoline Profile. If quantified using Gasoline's response factor, concentration would equal 2.0mg/Kg.

Vincent Vancil
Analyst

Michael Verona
Operations Manager

1220 Quarry Lane • Pleasanton, California 94566-4756
(925) 484-1919 • Facsimile (925) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

DRAFT

Submission #: 9811197

November 19, 1998

AQUA SCIENCE ENGINEERS INC

Atten: Dave Allen

Project: OLYMPIC SERVICE STATION Project#: 4306
Received: November 12, 1998

re: One sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: STKP-A(5-8)
Spl#: 215466 Matrix: SOIL
Sampled: November 11, 1998 Run#:16067 Analyzed: November 19, 1998

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	1.0	N.D.	99	1
MTBE	0.012	0.0050	N.D.	78	1
BENZENE	N.D.	0.0050	N.D.	94	1
TOLUENE	0.055	0.0050	N.D.	93	1
ETHYL BENZENE	0.026	0.0050	N.D.	93	1
XYLENES	0.066	0.0050	N.D.	92	1

Note: *Hydrocarbon found in Gasoline Range is uncharacteristic of Gasoline Prefile. If quantified using Gasoline's response factor, concentration would equal 5.6mg/Kg. MTBE result draft pending GC/MS confirmation.*

Vincent Vancil
Analyst

Michael Verona
Operations Manager

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CHROMALAB, INC.

Environmental Services (SDB)

November 19, 1998 Submission #: 9811197

AQUA SCIENCE ENGINEERS INC

Atten: Dave Allen

Project: OLYMPIC SERVICE STATION Project#: 4306
Received: November 12, 1998

re: One sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: STKP-B(1-4)
Spl#: 215467 Matrix: SOIL
Sampled: November 11, 1998 Run#:16067 Analyzed: November 19, 1998

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	1.0	N.D.	99	1
MTBE	N.D.	0.0050	N.D.	78	1
BENZENE	N.D.	0.0050	N.D.	94	1
TOLUENE	N.D.	0.0050	N.D.	93	1
ETHYL BENZENE	N.D.	0.0050	N.D.	93	1
XYLENES	N.D.	0.0050	N.D.	92	1

Vincent Vancil
Analyst

Michael Verona
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PM VTS: GsBTEXOC0220

CHROMALAB, INC.

Environmental Services (SDB)

November 19, 1998 *Submission #:* 9811197

AQUA SCIENCE ENGINEERS INC

Attn: Dave Allen

Project: OLYMPIC SERVICE STATION *Project#:* 4306
Received: November 12, 1998

re: One sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: STKP-B(5-8)
Spl#: 215468 *Matrix:* SOIL
Sampled: November 11, 1998 *Run#:*16066 *Analyzed:* November 19, 1998

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	1.0	N.D.	97	1
MTBE	N.D.	0.0050	N.D.	100	1
BENZENE	N.D.	0.0050	N.D.	95	1
TOLUENE	N.D.	0.0050	N.D.	91	1
ETHYL BENZENE	N.D.	0.0050	N.D.	89	1
XYLENES	N.D.	0.0050	N.D.	88	1

Vincent Vancil
Analyst

Michael Verona
Operations Manager

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FM V1R0:BTEX8020 WINCE 10.44

CHROMALAB, INC.

Environmental Services (SDB)

November 19, 1998 Submission #: 9811197

AQUA SCIENCE ENGINEERS INC

Attn: Dave Allen

Project: OLYMPIC SERVICE STATION Project#: 4306
Received: November 12, 1998

re: 4 samples for TPH - Diesel analysis.
Method: EPA 8015M

Matrix: SOIL Extracted: November 16, 1998
Sampled: November 11, 1998 Run#: 15984 Analyzed: November 19, 1998

Spl#	CLIENT SPL ID	DIESEL (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
215465	STKP-A(1-4)	62	2.0	N.D.	79.4	2
	Note: Hydrocarbon reported does not match the pattern of our Diesel Standard. Surrogate Recoveries biased high due to Hydrocarbon co-elution.					
215466	STKP-A(5-8)	28	5.0	N.D.	79.4	5
	Note: Hydrocarbon reported does not match the pattern of our Diesel Standard.					
215467	STKP-B(1-4)	220	20	N.D.	79.4	20
	Note: Hydrocarbon reported is in the late Diesel Range and does not match our Diesel Standard. Surrogate Recoveries biased high due to Hydrocarbon co-elution.					
215468	STKP-B(5-8)	280	2.0	N.D.	79.4	2
	Note: Surrogate Recoveries biased high due to Hydrocarbon co-elution.					

Carolyn House
Analyst

Bruce Havlik
Analyst

CHROMALAB, INC.

Environmental Services (SDB)

November 19, 1998 *Submission #:* 9811197

AQUA SCIENCE ENGINEERS INC

Attn: Dave Allen

Project: OLYMPIC SERVICE STATION *Project#:* 4305
Received: November 12, 1998

re: 4 samples for Lead analysis.
Method: EPA 3050A/7420A

Matrix: SOIL *Extracted:* November 16, 1998
Sampled: November 11, 1998 *Run#:* 15981 *Analyzed:* November 16, 1998

Spl#	CLIENT SPL ID	LEAD (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
215465	STKP-A(1-4)	33	5.0	N.D.	100	1
215466	STKP-A(5-8)	N.D.	5.0	N.D.	100	1
215467	STKP-B(1-4)	110	5.0	N.D.	100	1
215468	STKP-B(5-8)	N.D.	5.0	N.D.	100	1

Christopher Arndt
Analyst

Michael Verona
Operations Manager

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