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October 30, 2007

Mr. Jerry Wickham Alameda County Environmental Health Services 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

Subject: Site Located at 1544 Stanley Boulevard, Pleasanton, CA Fuel Leak Case No. RO0002603, Eliot Aggregate Plan

Dear Mr. Wickham:

On behalf of CEMEX Construction Materials, SOMA's "Workplan to Conduct Additional Soil and Groundwater Investigation Around Former Underground Storage Tanks" for the subject site has been uploaded to Alameda County's FTP site for your review. It will be uploaded to the State's GeoTracker database as soon as we are an authorized responsible party agent for this site.

If you have any questions or comments, please call me at (925) 734-6400. Your time is greatly appreciated in reviewing this report.

Sincerely

Mansour Sepenr, Ph.D., PE Principal Hydrogeologist

Enclosure

cc: Mr. Robert Aldenhuysen CEMEX



# Workplan to Conduct Additional Soil and Groundwater Investigation **Around Former Underground Storage Tanks**

**1544 Stanley Boulevard** Pleasanton, California

October 30, 2007

Project 3040

**Prepared for** 

**CEMEX** Construction Materials, L.P. 6601 Koll Center Parkway Pleasanton, California 94566



Stand Environmental Engineering, INC. 6620 Owens Drive Suite A Pleasanton CA 94588 Ph: 925.734.6400 F: 925.734-6401 www.somaenv.com

### PERJURY STATEMENT

Subject: 1544 Stanley Boulevard, Pleasanton, CA Workplan to Conduct Additional Soil and Groundwater Investigation Around Former Underground Storage Tanks

"I declare under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge".

Robert Aldenhuyser CEMEX 5180 Golden Foothill Parkway, Suite 200 El Dorado Hills, California 95762 Responsible Party

# CERTIFICATION

SOMA Environmental Engineering, Inc. has prepared this workplan on behalf of CEMEX Construction Materials, L.P., property owner of 1544 Stanley Boulevard, Pleasanton, California, to further evaluate the presence of petroleum hydrocarbons in soil and groundwater and determine whether existing chemicals in soil and groundwater pose an unacceptable human health risk to future residents of the property.

Mansour Sepehr, Ph.D., P.E. Principal Hydrogeologist



Workplan to Conduct Additional Soil and Groundwater Investigation

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## 1. INTRODUCTION

SOMA Environmental Engineering, Inc., (SOMA) has prepared this workplan on behalf of CEMEX Construction Materials, L.P. (CEMEX). The project site is known as Eliot Aggregate Plant and is located at 1544 Stanley Boulevard, Pleasanton, California (the Site). Figure 1 shows the Site and surrounding areas.

The Site was previously owned and operated by RMC Pacific Materials, Inc. until CEMEX purchased the company in June 2005. On November 20, 2003, during the installation of under-dispenser containment (UDC) at the gasoline dispenser, analysis of soil samples taken 3 feet below the dispenser disclosed the presence of methyl tertiary-butyl ether (MtBE) at 71 milligrams per kilogram (EPA Method 8260B). On October 7, 2005, and again on February 24, 2006, the Alameda County Environmental Health Department (ACEHD) requested the submittal of a workplan to assess the lateral and vertical extent of soil and groundwater contamination beneath the site. In response, CEMEX submitted a request to postpone delineation of the soil and water contamination until the two underground fuel storage tanks (USTs) on the Site were removed.

On January 11, 2007, at the direction of ACEHD, a California state-licensed contractor removed two 10,000-gallon USTs (gasoline and diesel) from the Site. On April 18, 2007, CEMEX submitted a report entitled "Fuel Tank Removals - Fuel Leak Case #R00002603, RMC Pacific Materials d.b.a. CEMEX - Eliot Aggregate Plant, 1544 Stanley Blvd., Pleasanton, CA 94566" in which laboratory analysis results for the soil samples taken from the two UST and dispenser excavations revealed that all samples were non-detectable to a depth of 13 feet below ground surface (bgs) for the following: benzene, toluene, ethylbenzene, total xylenes (BTEX); MtBE; ethyl tertiary-butyl ether (ETBE); tertiary-butyl alcohol (TBA); tertiary-amyl methyl ether (TAME); diisopropyl ether (DIPE); 1,2-dichloroethane (1,2-DCA); and 1,2-dibromoethane (EDB). Subsequently, based on analytical results for soil samples, CEMEX requested that no further action (NFA) status to be adopted by the ACEHD. ACEHD responded with a letter dated May 8, 2007 stating that additional work would be required before NFA status could be considered.

This report proposes an additional field investigation to further characterize the extent of soil and groundwater contamination, if any, beneath the Site. Figure 2 shows Site features including former locations of USTs.

# 2. SCOPE OF WORK

Per ACEHD directive, the objective of the proposed investigation is to evaluate whether groundwater beneath the former USTs has been impacted by petroleum hydrocarbons and its constituents. Therefore, the scope of work will involve drilling two hydropunches, collecting soil and groundwater samples, and performing laboratory analyses.

The scope of work will include the following tasks:

- Task 1: Permit acquisition and preparation of Site Health and Safety Plan
- Task 2: Drilling boreholes using direct push technology and collecting soil and groundwater samples
- Task 3: Laboratory analysis
- Task 4: Report preparation

Following are brief descriptions of the above tasks.

## 2.1 Permit Acquisition and Preparation of Site Health and Safety Plan

Before drilling, the necessary permits will be obtained from the Alameda County Public Works Agency, Water Resources Section.

Prior to commencing field activities, a site-specific health and safety plan (HASP) will be prepared by SOMA. The HASP is designed to address safety provisions during field activities. It provides procedures to protect the field crew from physical and chemical hazards resulting from drilling, well installation, and groundwater monitoring and sampling. The HASP establishes personnel responsibilities, general safe work practices, field procedures, personal protective equipment standards, decontamination procedures, and emergency action plans.

## 2.2 Drilling Soil Borings and Collecting Soil and Groundwater Samples

Although results of earlier investigation by CEMEX did not indicate the presence petroleum hydrocarbons in soils beneath the USTs, per ACDEH's request additional investigation will be conducted to evaluate the potential impact of petroleum hydrocarbons on soil and groundwater beneath the Site. Accordingly, SOMA proposes advancing two deep borings using direct-push technology (DPT) as presented in Figure 3. One soil boring will be drilled beneath the former gasoline UST, while the other will be drilled beneath the former diesel UST.

Based on elevations of nearby water bodies such as Shadow Cliffs Regional Park reservoir, and on depth-to-water measurements in the plant's water supply well, the groundwater table is expected to be encountered somewhere between 65 and 125 feet bgs.

SOMA proposes the DPT borings to be advanced to approximately 65-125 feet bgs. The borings will be terminated upon detection of the first water-bearing zone at the Site. Each boring will be continuously cored, and the cored soil described in accordance with the Unified Soil Classification System (USCS). In addition, the cored soil will be checked for hydrocarbon odors, visual staining, and liquid phase hydrocarbons (free product), and screened using a photo-ionization

detector (PID). PID readings will be noted on the boring logs. Based on PID readings, soil samples will be collected. At each boring location, one grab groundwater sample will be collected from the top of the water table for laboratory analysis.

Following soil sampling, the borings will be abandoned with a neat cement grout mixture tremmied into place as the push rods are removed, and completed at the surface with materials to match existing grade.

Soil and wastewater generated during boring activities will be temporarily stored on the Site in separate DOT-rated, 55-gallon steel drums pending characterization, profiling and transportation to an approved disposal/recycling facility.

A description of general field procedures is included in Appendix A.

## 2.3 Laboratory Analysis

Collected soil and groundwater samples will be submitted to a California statecertified environmental laboratory for analyses. The samples will be analyzed for the following:

- total petroleum hydrocarbons as gasoline (TPH-g)
- total petroleum hydrocarbons as diesel (TPH-d)
- BTEX
- MtBE

## 2.4 Report Preparation

SOMA will prepare a report to include the following:

- A description of field activities
- Tabulation of soil sample analytical data
- Maps illustrating boring locations
- Boring logs
- Conclusions and information derived from the field work and analytical data
- Recommendations

# 3. SCHEDULE

This workplan will be implemented upon receipt of written authorization from the ACEHD. SOMA anticipates that the scope of work described in this workplan will

be completed within six to eight weeks, under normal conditions, from the date of receipt of necessary approvals, authorizations and permits. Field activities will be scheduled according to availability of necessary equipment and personnel.

# **FIGURES**

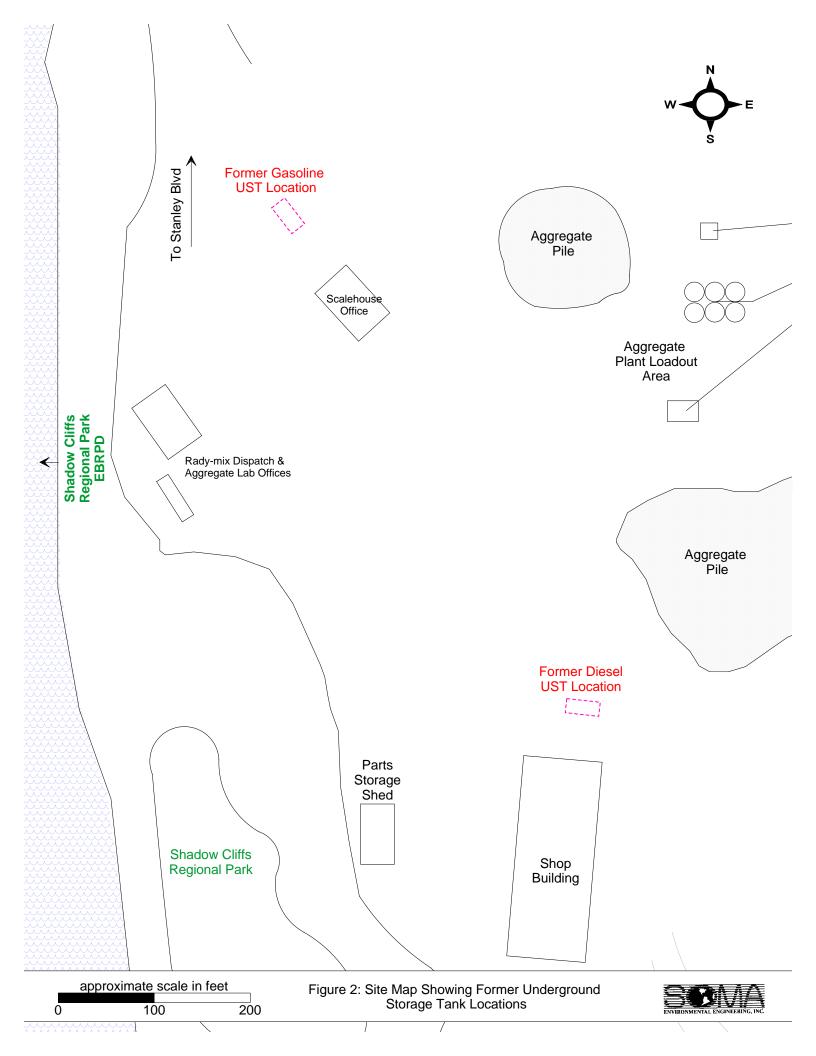
Workplan to Conduct Additional Soil and Groundwater Investigation

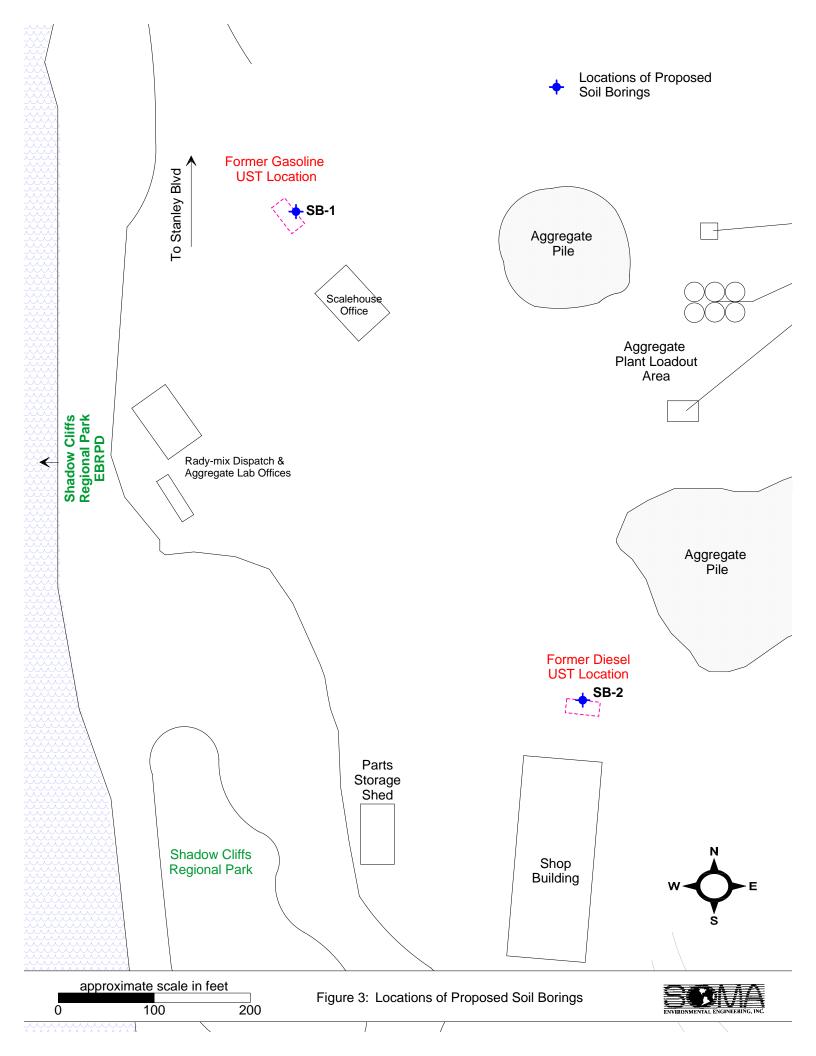


	approximate scale in feet			
0	45	50	900	

Figure 1: Site Vicinity







# APPENDIX A

# **Field Procedures**

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# FIELD PROCEDURES

## Single-Wall Hydraulic Push (GEOPROBE) Drilling

### Utility Locating

Prior to drilling, boring locations are marked with white paint or other discernible marking and cleared for underground utilities through Underground Service Alert (USA). In addition, the first 5 feet of each borehole are air-knifed, or carefully advanced with a hand auger if shallow soil samples are necessary, to help evaluate the borehole location for underground structures or utilities.

#### Borehole Advancement

Pre-cleaned push rods (typically 1 to 2 inches in diameter) are advanced using a hydraulic push type rig for the purpose of collecting samples and evaluating subsurface conditions. The drill rod serves as a soil sampler, and an acetate liner is inserted into the annulus of the drill rod prior to advancement. Once the sample is collected, the rods and sampler are retracted and the sample tubes are removed from the sampler head. The sampler head is then cleaned, filled with clean sample tubes, inserted into the borehole and advanced to the next sampling point where the sample collection process is repeated.

### Soil Sample Collection

The undisturbed soil samples intended for laboratory analysis are cut away from the acetate sample liner using a hacksaw, or equivalent tool, in sections approximately 6 inches in length. The 6-inch samples are lined at each end with Teflon sheets and capped with plastic caps. Labels documenting job number, borehole identification, collection date, and depth are affixed to each sample. The samples are then placed into an ice-filled cooler for delivery under chain-ofcustody to a laboratory certified by the State of California to perform the specified tests. The remaining collected soil that has not been selected for laboratory analysis is logged using the United Soil Classification System (USCS) under the direction of a State Registered Professional, and is field screened for organic vapors using a photo-ionization detector (PID), or an equivalent tool. Soil cuttings generated are stored in Department of Transportation (DOT) approved 55-gallon steel drums, or an equivalent storage container.

### Grab Groundwater Sample Collection

Once the desired groundwater sampling depth has been reached, a Hydropunch tip is affixed to the head of the sampling rods. The Hydropunch tip is advanced between approximately 6 to 12 inches within the desired groundwater sampling zone (effort is made to emplace the Hydropunch screen across the center of the water table), and retracted to expose the Hydropunch screen. Grab groundwater

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samples are collected by lowering a pre-cleaned, single-sample polypropylene, disposable bailer down the annulus of the sampler rod. The groundwater sample is discharged from the bailer to the sample container through a bottom emptying flow control valve to minimize volatilization. Alternatively, groundwater samples are collected by lowering a disposable bailer through the sampler rod or into the borehole.

Collected water samples are discharged directly into laboratory-provided, precleaned vials or containers and sealed with Teflon-lined septum, screw-on lids. Labels documenting sample number, well identification, collection date, and type of preservative (if applicable, e.g., HCI for TPH, BTEX, and fuel oxygenates) are affixed to each sample. The samples are then placed into an ice-filled cooler for delivery under chain-of-custody to a laboratory certified by the State of California to perform the specified tests.

### **Borehole Completion**

Upon completion of drilling and sampling, the rods are retracted. Neat cement grout, mixed at a ratio of 6 gallons of water per 94 pounds of Portland cement, is introduced, via a tremmie pipe, and pumped to displace standing water in the borehole. Displaced groundwater is collected at the surface into DOT approved 55-gallon steel drums, or an equivalent storage container. In areas where the borehole penetrates asphalt or concrete, the borehole is capped with an equivalent thickness of asphalt or concrete patch to match finished grade.

## Organic Vapor Procedures

Soil samples are collected for analysis in the field for ionizable organic compounds using a PID with a 10.2 eV lamp. The test procedure involves measuring approximately 30 grams from an undisturbed soil sample, placing this subsample in a Ziploc--type bag or in a clean glass jar, and sealing the jar with aluminum foil secured under a ring-type threaded lid. The container is warmed for approximately 20 minutes (in the sun); then the head-space within the container is tested for total organic vapor, measured in parts per million as benzene (ppm; volume/volume). The instrument is calibrated prior to drilling. The results of the field-testing are noted on the boring logs. PID readings are useful for indicating relative levels of contamination, but cannot be used to evaluate petroleum hydrocarbon levels with the same precision as laboratory analyses.

## Equipment Decontamination

Equipment that could potentially contact subsurface media and compromise the integrity of the samples is carefully decontaminated prior to drilling and sampling. Drill augers and other large pieces of equipment are decontaminated using high pressure hot water spray. Samplers, groundwater pumps, liners and other

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equipment are decontaminated in an Alconox scrub solution and double rinsed in clean tap water rinse followed by a final distilled water rinse.

The rinsate and other wastewater are contained in 55-gallon DOT-approved drums, labeled (to identify the contents, generation date and project) and stored on-site pending waste profiling and disposal.

#### Soil Cuttings and Rinsate/Purge Water

Soil cuttings and rinsate/purge water generated during drilling and sampling are stored on-site in DOT-approved 55-gallon steel drums pending characterization. A label is affixed to the drums indicating the contents of the drum, suspected contaminants, date of generation, and the boring number from which the waste is generated. The drums are removed from the site by a licensed waste disposal contractor under manifest to an appropriate facility for treatment/recycling.