August 16, 2006

Alameda County Department of Environmental Health 1131 Harbor Bay Parkway, 2nd Floor Alameda, CA 94502

Attention: Steven Plunkett

Subject: Workplan for Soil and Water Investigation

MacArthur Ltd. Property, 900-910 81st Avenue, Oakland, California

GA Project No. 322-01-01

ACDEH SLIC Case No. RO0002916

Ladies and Gentlemen:

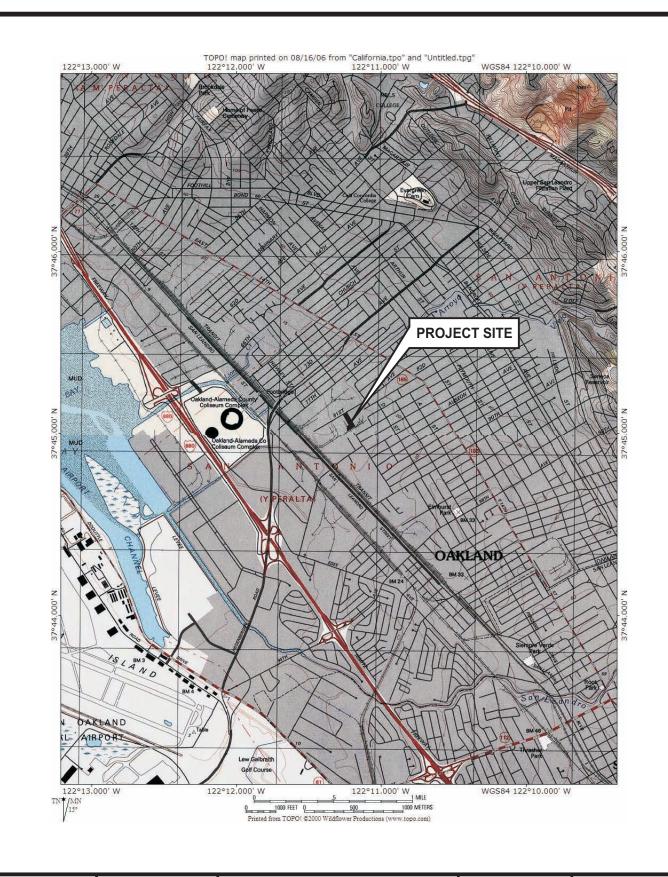
Pursuant to your request, this letter provides a Soil and Groundwater Investigation (SGI) workplan for the commercial property located at 900-910 81st Avenue in Oakland, California (see Figure 1 and Figure 2). This workplan seeks to address technical comments contained in the letter from Alameda County Department of Environmental Health (ACDEH) to Mr. Richard Weinstein dated June 19, 2006. In addition, this workplan proposes the drilling and sampling of eight investigative soil borings on the site.

Note that, based on the lack of groundwater beneficial uses in the area and the low risk posed by the nonvolatile motor oil range hydrocarbons encountered in the SB-1 groundwater sample, we believe that regulatory closure should be granted for this site as a low-risk site with industrial/commercial use only. However, we understand that ACDEH will require additional investigative activities before granting closure.

GENERAL SITE DESCRIPTION AND SITE BACKGROUND

The project site consists of a nominally "L"-shaped land parcel located on the south side of 81st Avenue, approximately 900 feet northeast from San Leandro Street (see Figure 1 and Figure 2). According to the USGS San Leandro, California 7.5-Minute Quadrangle Map, the project site lies on a gently southwest-sloping plain approximately 1.5 miles northeast from San Leandro Bay and two miles southwest from the northwest-southeast trending Oakland Hills. The elevation at the project site is approximately 15 feet above mean sea level. The project site is located in a predominantly industrial and commercial area of Oakland.

The project site is currently undergoing redevelopment, with a new multi-tenant building having replaced the previous north building (formerly Units 1 through 6), and a new multi-tenant building in the former yard area north of Units 15, 16, and 17, on the southwest side of the site. During our site visit, we noted that most of the site units are not in use, with the exception of a



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PROJECT NO: 322-01-01

SITE VICINITY MAP

900-910 81ST AVENUE OAKLAND, CALIFORNIA DATE: 08/16/06 FIGURE: **1**



bakery and an awning company in respective Units 17 and 18, and an unmarked business in Unit 10. All of the building floors are concrete paved, with no apparent drainage channels or catch basins inside the buildings. The yard areas outside the site buildings are, for the most part, asphalt-paved. Four catch basins are present on the south and southwest portions of the yard, adjacent to the south site building (Units 7 through 18). The asphalt yard areas are graded towards the catch basins, and the four catch basins are connected via below ground piping, with drainage appearing to flow to the most northerly catch basin. These catch basins appear to be a closed system, with storm water flowing north to the northerly catch basin, and then northward above ground to 81st Avenue. A separate below ground sewer line appears to run along the site building, between the site building and the catch basins.

In preparing this workplan, Gribi Associates reviewed the following site documents supplied by Weinstein Commercial Investments:

<u>UST Removal and Closure Documents</u>

- Environmental Consulting Regarding Underground Storage Tanks, 910 81st Avenue, Oakland, California; Subsurface Consultants, Inc., February 26, 1992.
- Remedial Action Completion Certification; Alameda County Department of Environmental Health, February 28, 1996.

Elmhurst Anodizing Closure-Related Documents

- Environmental Services, 910 81st Avenue-Unit #18, Oakland, California; March 13, 1997.
- Proposal to Pressure Wash and Epoxy Coat Floor & Walls at 910 81st Avenue, Oakland, California; AEI Consultants, October 17, 2000.
- Wipe Sample Survey, 910 81st Avenue, Unit #18, Oakland, California; AEI Consultants, December 18, 2000.

Environmental Site Assessment Documents

- Phase I Environmental Site Assessment, 900-910 81st Avenue, Oakland, California, 94621; AEI Consultants, February 25, 2003.
- Addendum Letter, 900-910 81st Avenue, Oakland, California; AEI Consultants, April 3, 2003.
- Environmental Transaction Screen, 900-910 81st Avenue, Oakland, California; Basics Environmental, February 14, 2006.



- Limited Phase II Environmental Site Sampling, 900-910 81st Avenue, Oakland, California; Basics Environmental, March 20, 2006.
- SLIC Case RO0002916, MacArthur Ltd. Property, 900-910 81st Avenue, Oakland, CA; Letter from Alameda County Department of Environmental Health to Mr. Richard Weinstein, MacArthur Ltd. Liability Company, dated June 19, 2006.

UST Removal and Closure Documents

The 1992 Subsurface Consultants, Inc. (SCI) report states that the project site was unoccupied until 1949, when a small (7,200 square feet) building was constructed on the northwest side of the site, adjacent to 81st Avenue. This building was occupied by Tancredy Plumbing from 1949 until the early 1960s, when the property went into foreclosure. A small building addition was apparently added to the site building in 1957, and the south building structure (current Units 7 through 18) were added sometime between the early 1960s and the early 1970s.

The SCI report indicates that one 1,000-gallon gasoline underground storage tank (UST) was installed on the northwest side of the site, adjacent to the 81st Avenue curb, sometime after construction of the building. A former Tancredy Plumbing employee apparently indicated that a second UST may have been present near the rear of the original building (near current Unit 7); however, no fire department or building department records apparently exist for these USTs.

The Alameda County Department of Environmental Health (ACDEH) case closure certification indicates that the 1,000-gallon gasoline UST was removed in June 1992. One hole was noted in the bottom of the UST, and soil and groundwater samples from the excavation showed detectable concentrations of gasoline constituents. The UST excavation cavity was overexcavated in August 1993, and approximately 90 cubic yards of hydrocarbon-impacted soil was removed for offsite disposal.

In January 1993, four soil borings and one groundwater monitoring well were installed adjacent to the former UST. Soils in the five borings consisted primarily of clays, with a thin (1 to 3-foot thick) clayey sand at about five feet in depth in four of the borings. Groundwater was encountered in the borings at about five feet in depth. Subsequent quarterly groundwater monitoring of groundwater well MW-1, which was located about ten feet southwest from the former UST excavation, showed low concentrations of TPH-G, with no significant BTEX concentrations.

The ACDEH Remedial Action Completion Certification states that groundwater flow direction, based on data from three west sites, varies from southwest to northwest. The certification also states that there are no surface water impacts and that the most sensitive current groundwater use is Industrial.



Elmhurst Anodizing (Unit 18) Closure-Related Activities

Elmhurst Anodizing apparently operated in Unit 18, the most southwesterly unit, from approximately 1990 until their eviction in early 1996. A subsequent inspection of the facility by USEPA revealed the presence of numerous drums and containers with waste acids and caustic solutions that required immediate mitigation. SCI conducted a three-phase removal action which included: (1) Immediate packaging and removal of high-risk containers; (2) Packaging and removal of other liquids, solids, and debris; and (3) Decontamination of interior walls and floors, and sampling of soils and floor and wall surfaces. These activities were conducted successfully, and, while floor and wall surfaces showed some residual metals concentrations, a shallow soil sample collected outside the southwest roll-up door showed neutral pH conditions and background metals concentrations.

AEI Consultants conducted wall and floor wipe sampling in October 2000 which showed elevated levels of lead, zinc, and mercury. The wall and floor areas were apparently pressure washed and epoxy coated, and subsequent wall and floor wipe sample results showed markedly lower concentrations of metals. Based on these results, AEI Consultants recommended no additional remedial or investigative measures.

Environmental Site Assessment Activities

The February 2003 AEI Consultants Phase I ESA indicates the following project site tenants with potential or known hazardous waste storage activities:

Business Name	Unit Number	Source	Date	Reported Information
LCB Associates	18	OFD	1986	Haz waste manifest for storage of waste flammable corrosive solids and waste corrosive liquids
LCB Associates	18(?)	OFD	Unknown	After LCB vacated premises, the tenant space was used as an illicit drug lab. Numerous chemical containers were present, but no spills or releases reported.
LCB Associates	Not Specified	OFD	1996	Case closure granted for former 1,000-gal. gasoline UST.
Elmhurst Anodizing	18	USEPA	Unknown	Site listed on Comprehensive Environmental Response Compen-sation and Liability Information System (CERCLIS) for activities previously described.
Metal Craft Industries	3	OFD	Unknown	Storage of solvent, acetone, cutting oil and machine oil in small (< 5 gal.) containers.
Millward Trucking	12	OFD	1994	Two 250-gallon waste oil ASTs inside the tenant space.
Cronin Marin Repair	16	OFD	1994	Storage of approx. 20 gallons of waste oil and 15 gallons of non-halogenated solvents.
Wards Custom Painting	8	OFD	1998	Identified as a small-quantity hazardous waste generator with no violations.



USEPA = United States Environmental Protection Agency



AEI Phase I ESA did not consider any of the above site uses to be a recognized environmental condition. The only recognized environmental conditions that warranted additional attention included: (1) One 55-gallon oil-containing drum and the associated oil-stained gravel ground surface surrounding the drum, located on the western edge of the site; (2) AEI recommended that, based on post-remediation wipe sample results, case closure be pursued for the open CERCLIS case for Unit 18; and (3) AEI recommended that verification be obtained that well MW-1, previously associated with the 1,000-gallon gasoline UST investigation and closure, had been properly decommissioned. The April 2003 Addendum Letter from AEI Consultants states that the 55-gallon oil drum and oil-stained gravel at the western property edge had been removed and, thus, no longer required mitigation or additional investigation.

The February 2006 Basics Environmental Environmental Transaction Screen indicates the following past project site tenants with potential or known hazardous waste storage activities:

Business Name	Unit Number	Source	Date	Reported Information
Tancredy Plumbing	(1-6)	City directorie s	1949-early 1960s	Possible metals, lubricating oils, solvents
Mulgrew Printers/Inkspot	Not Specified	City directorie s	1970s-1980s	Possible inks and solvents
Metal Craft Industries	3	OFD	Unknown	Storage of solvent, acetone, cutting oil and machine oil in small (< 5 gal.) containers.
Millward Trucking	12	OFD	1994	Two 250-gallon waste oil ASTs inside the tenant space.
Cronin Marin Repair	16	OFD	1994	Storage of non-halogenated solvents.
Derbe Enterprises	5 & 6	ACEHA	1994	Storage of waste oil and waste solvent.
Wards Custom Painting	8	OFD	1998	Identified as a small-quantity hazardous waste generator with no violation.
LCB Associates	18(?)	OFD	Unknown	After LCB vacated premises, the tenant space was used as an illicit drug lab. Numerous chemical containers were present, but no spills or releases reported.
LCB Associates	Not Specified	OFD	1996	Case closure granted for former 1,000-gal. gasoline UST.
Elmhurst Anodizing	18	USEPA	Unknown	Site listed on Comprehensive Environmental Response Compen-sation and Liability Information System (CERCLIS) for activities previously described.

OFD = Oakland Fire Department

ACEHA = Alameda County Environmental Health Agency

 $USEPA = United \ States \ Environmental \ Protection \ Agency$

The Basics Environmental Limited Phase II Environmental Site Sampling investigation was conducted in March 2006 and included the drilling and sampling of five soil borings, SB-1 through SB-5, using direct-push coring equipment. Since no specific areas of concern or subsurface conduits were identified, four of the borings (SB-1 through SB-4)were sited adjacent



to catch basins, where potential unchecked hazardous waste spills would be expected to collect, and one of the borings (SB-5) was sited in the unpaved area on the northwest side of the site.

Soil samples collected at four feet in depth from each of the five borings showed no detectable concentrations of hydrocarbons and background levels of metals. A grab groundwater sample collected from southwesterly boring SB-1 showed 4,900 micrograms per liter (ug/l) of Total Petroleum Hydrocarbons as Motor Oil (TPH-MO), 520 ug/l of Total Petroleum Hydrocarbons as Diesel (TPH-D), and 1.2 ug/l of MTBE. The groundwater sample showed no detectable Volatile Organic Compounds (VOCs) and background levels of metals. The TPH-D lab result contains a laboratory flag that states "oil range components are significant", thus indicating that the TPH-D result is carry over from motor oil range hydrocarbons.

After reviewing the Basics Environmental Limited Phase II Environmental Site Sampling report, the Alameda County Department of Environmental Health (ACDEH) issued a letter on June 19, 2006 requesting additional information and investigation at the site.

EVALUATION OF SITE ENVIRONMENTAL CONDITIONS

Based on our review of available site documents and on our experience on hundreds of sites in Alameda County and throughout the San Francisco Bay Area, we would make the following general comments regarding site and site area environmental conditions:

- 1. Our experience on several sites in the site vicinity has been that contaminant plumes in this area of the East Bay tend to be small and concentrated, and not extensive. This is due, we believe, to the combination of clay-dominated soils and the relatively flat groundwater gradient throughout the area, resulting in minimal downgradient migration of contaminants. We have worked directly on sites (former Chevron site at 7617 San Leandro Street; Achatz Property at 8943-9009 San Leandro Street; former Echco Sales site at 6161 Coliseum Way) and have reviewed numerous regulatory case files for Phase I ESAs (Western Colloid at 700 71st St; Kjs/Lockup Self Storage at 8855 San Leandro Street; American Tractor at 9131 San Leandro Street; K&L Plating at 989 89th Avenue; Union Pacific Railroad at 700 73rd Avenue) where this is the case. This conclusion is also borne out in the investigated results for the former project site UST, where soil and groundwater impacts were present beneath the removed UST, but were found to be minimal immediately downgradient from the former UST.
- 2. Groundwater in the site vicinity is encountered at shallow depths (normally between five and ten feet below ground surface). Over several quarterly groundwater monitoring events in former site well MW-1, groundwater depths ranged from 4.22 feet to 5.65 feet below top of casing. Based on site topography and direction from San Leandro Bay, as well as on our experience on area sites, we would expect groundwater flow to be to the west-southwest.



- 3. The site is located in a commercial/industrial area of Oakland, with no residential land use in an expected downgradient (southwest to northwest) groundwater flow direction from the project site. In addition, while the Basin Plan designates the East Bay Plain Subasin as having both municipal/domestic and industrial/agricultural existing beneficial uses, we are unaware, in past discussions with various ACDEH and San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) staff, of any significant groundwater use in the site vicinity, particularly since municipal water sources have been readily available for at least 80 years. Certainly, since there has been no significant residential land use in the immediate site area for approximately four decades, there would be no expectation of current or future domestic or municipal use of groundwater in the site area. Also, a review of deeper soil boring data for nearby sites (K&L Plating, Union Pacific Railroad Coliseum site, former Echco Sales site) indicates that, while some thin, discontinuous sand layers may be present at relatively shallow depths, more continuous high-yield sand and gravel aquifer materials occur below 50 feet in depth. Finally, the Remedial Action Closure Certification for the former project site 1,000gallon gasoline UST, prepared by the ACDEH and approved by the SFBRWQCB, states that the most sensitive beneficial groundwater use is Industrial, and that no drinking water wells and no surface water bodies are affected.
- 4. While several past site tenants have been identified as having, or possibly having, used or stored hazardous substances, most of the hazardous substances associated with these tenants would have been petroleum products (waste oil, motor oil, lubricating oils, non-halogenated solvents, cutting oils, and solvents). The main exception to this was in Unit 18, where metal plating substances (acids, caustics, solvents, metals) were apparently stored in the past. However, a shallow soil sample collected outside the southwest roll-up door at Unit 18 in 1997showed neutral pH and background metals concentrations. Given these results, as well as the site configuration (small concrete-floored tenant spaces with asphalt-paved exteriors) and the underlying Bay Mud clays, we would not expect past tenant activities to have resulted in significant or widespread environmental impacts.
- 5. During the Basics Environmental Limited Phase II investigation, the only hydrocarbon detection was 520 ug/l of TPH-D and 4,900 ug/l of TPH-MO in the grab groundwater sample from SB-1. The TPH-D lab result contains a laboratory flag that states "oil range components are significant", thus indicating that the TPH-D result is carry over from motor oil range hydrocarbons, a fairly common occurrence. The SFBRWQCB Environmental Screening Level (ESL) for TPH-D and TPH-MO of 640 ug/l for nondrinking water sources reported in the Basics Environmental report is not correct, since this ESL is an Aquatic Habitat Goal (see Table F-1b). The Gross Contamination Ceiling Value ESL for TPH-D and TPH-MO is 2,500 (based on ½ solubility) (see Table I-2), and the TPH-D and TPH-MO Upper Limit ESL "intended to limit general groundwater degradation" is 50,000 ug/l. Note that we have obtained regulatory closure on sites in the East Bay area with TPH-G, TPH-D, or TPH-MO concentrations that



exceed ESLs, provided: (1) The hydrocarbon plume is limited and stable; (2) There is no free product present; and (3) Individual constituent (BTEX, PNAs, etc.) concentrations either do not exceed ESLs or do not pose a risk to environmental or human health receptors.

RESPONSES TO ACDEH TECHNICAL COMMENTS

1. Soil and Groundwater Sampling Locations. Since past hazardous substance storage areas are not known (past tenants are no longer present), Basics Environmental placed the borings on the downgradient (west) side of the site. Also, the site catch basin system, which appears to be a closed system with, perhaps, open bottom catch basins, would tend to concentrate contaminants emanating from the various tenant spaces and asphalt yard areas. Thus, in the absence of known hazardous substance storage areas and release areas, the testing of soil and groundwater adjacent to the low-lying catch basins would constitute a reasonable sampling strategy. We have used this same strategy on similar sites, and have, on occasion, identified soil and groundwater contaminant concentrations adjacent to catch basins.

Relative to sample depths, since expected contaminant releases from the various tenant uses would have been limited to surface spills, the sampling of shallow soils would make sense, since surface releases must travel through soil to reach groundwater. Adjacent to catch basins, one would sample below the bottom of the catch basins. Given the Bay Mud soils at shallow depth beneath the site, sampling shallow soils is probably more appropriate first step than sampling groundwater, since impacts may be limited to shallow soils only. Also, since groundwater is so shallow at this site (4 to 6 feet in depth), the 4-foot deep soil samples represent vadose zone soils just above the groundwater table, and there is no need to sample deeper soils unless the shallower samples show significant impacts.

Relative to Oakland Fire Department files, both the AEI Consultants 2003 Phase I ESA and the Basics Environmental 2006 Phase I Environmental Transaction Screen included a review of Oakland Fire Department files for various past site tenants. The Basics Environmental Limited Phase II Environmental Site Sampling report includes a summary of this review in the Background section (items 4 and 5), and it appears that they did attempt to incorporate these results into their sampling plan, but that the records did not identify specific hazardous waste storage areas or other areas of concern.

Note that we generally concur with the Basics sampling approach, namely that, in the absence of known areas of concern (stained areas, subsurface conduits, identified historical hazardous waste storage areas), targeting shallow soils adjacent to catch basins and in the unpaved area on the downgradient side of the site represents a reasonable approach. However, in hindsight, the collection of grab groundwater samples from all borings, rather than from just one boring, would have been advisable.



2. Defining the Horizontal and Vertical Extent of Contamination. The only contaminant identified during the Basics Environmental Limited Phase II investigation was 4,900 ug/l of TPH-MO (as the McCampbell lab report indicates, the TPH-D result is likely carry over from the TPH-MO result). Relative to horizontal and vertical impacts, motor oil range hydrocarbons do not migrate significantly and are less dense than water. Thus, we would not expect these groundwater impacts to be extensive, and there is no expectation that these motor oil range hydrocarbon impacts would extend to a significant depth below the groundwater table. Thus, while we concur that lateral extent has not been defined, the vertical extent of TPH-MO groundwater impacts is essentially defined by the groundwater table.

A workplan proposing additional investigative activities is included in a following section of this report.

- 3. Preferential Pathway Study. We believe that a phased approach is warranted for this site. At this point, we have a single groundwater detection for dissolved TPH-MO. The next step should be to confirm the initial result and define lateral impacts. It is premature to conduct a full preferential pathway study at this time, particularly given the nature of the contaminant (slow migration, nonvolatile). However, we have included better definition of onsite below ground utilities (storm water and sewer) on site plans in the workplan included herein.
- a. Well Survey. As stated above, we believe that a phased approach is warranted for this site. At this point, we have a single groundwater detection for dissolved TPH-MO. Based on this result and on the location of the site in a solely industrial area, the requirement for a well survey of all wells within a ½ mile radius is wholly unwarranted at this time. Within the normal steps of an investigation, a well survey is conducted after both the nature and extent of contaminants is defined. Also, given the industrial land uses in the vicinity and the readily available municipal groundwater sources in the area, there is no expectation of significant groundwater use in the area, and currently there can be no domestic groundwater use downgradient from the site, since there are no residences within a reasonable distance downgradient from the site.
- **b. Utility Survey.** As stated previously, we have included better definition of onsite below ground utilities (storm water and sewer) on site plans in the workplan included herein.
- 4. Request For Information.

All information that Mr. Richard Weinstein has regarding environmental conditions on this site will be provided with this workplan.



WORKPLAN TO CONDUCT SOIL AND GROUNDWATER INVESTIGATION

In order to address ACDEH concerns, the following workplan proposes the drilling and sampling of approximately eight soil borings on the site. Soil borings will be drilled and sampled using direct-push coring equipment, and will include the collection of both soil and groundwater samples from each boring. The goal of the proposed investigation will be to provide a comprehensive soil and groundwater assessment in order to address regulatory site closure.

Prefield Activities

Prior to implementing this workplan, written approval will be obtained from the ACDEH. Also, soil boring permits will be obtained from Alameda County Department of Public Works, and 48-hour notification will be given to Alameda County Department of Environmental Health prior to implementing field activities. In addition, proposed boring locations will be marked with white paint, and Underground Services Alert (USA) will be notified at least 48 hours prior to drilling. Also, a private underground utility locator will clear proposed boring locations. Prior to initiating drilling activities, a Site Safety Plan will be prepared, and a tailgate safety meeting will be conducted with all site workers.

Location of Borings

Proposed soil boring locations are shown on Figure 3. Borings GA-1 and GA-2 will be sited in an expected downgradient (west-southwest) direction from the original site building, which were previously occupied by Tancredy Plumbing, Metal Craft Industries, and Derbe Enterprises. Boring GA-3 will be sited downgradient from Unit 8, which previously housed Wards Custom Painting, and boring G-4 will be sited downgradient from Unit 12, which previously housed Millward Trucking. Borings GA-5, GA-6, and GA-7 will surround previous Basics boring SB-1 on the southeast, northwest, and southwest sides, respectively. Finally, boring GA-8 will be sited on the downgradient side of Units 16 and 18, which previously housed Cronin Marine and Elmhurst Anodizing, respectively.

We believe that, in the absence of specific hazardous substance storage or release areas, placing the borings downgradient from those units where known or possible hazardous substance storage or handling activities occurred, as shown on Figure 3, will provide adequate coverage in determining whether or not significant releases occurred on this site. Thus, if results of soil and groundwater analysis from the eight proposed borings show no significant impacts, indicating that the TPH-MO in previous boring SB-1 is an isolated impact, then we believe that ACDEH should grant regulatory closure for this site.

Drilling and Sampling of Borings

The investigative soil borings will be drilled to approximately 12 feet in depth using direct-push hydraulically-driven soil coring equipment. For each boring, continuos soil cores will be



collected to total depth in each boring in a clear plastic acetate tube, nested inside a stainless steel core barrel. After each four-foot core barrel is brought to the surface and exposed, the core will be sliced lengthwise to expose the soil core, examined, logged, and field screened for hydrocarbons by a qualified geologist using sight, smell, and an organic vapor monitor (OVM). Following completion, the investigative borings will be grouted to match existing grade using a cement\sand slurry. Soil cuttings generated during this investigation will be stored onsite in sealed DOT-approved containers.

Field data will be collected by one registered geologist. Prior to logging, each soil core will first be sliced open lengthwise along the length of the acetate tube, allowing full examination and logging of the soil core prior to sampling. Soil samples will then be collected from specific zones of interest using glass jars with teflon-lined septums as follows: (1) The selected soil interval will be packed tightly into the jar, making sure that air pockets are minimized; (2) The jar will be tightly sealed with a teflon-lined cap; and (3) The sealed soil sample will be labeled and immediately placed in cold storage for transport to the analytical laboratory under formal chain-of-custody. All coring and sampling equipment will be thoroughly cleaned and decontaminated between each sample collection by triple rinsing first with water, then with dilute tri-sodium phosphate solution, and finally with distilled water. Cleaning rinseate will be contained onsite in a sealed drum pending laboratory results.

One grab groundwater sample will be collected from each boring at first available groundwater (expected to be no deeper that 12 feet). Each grab groundwater sample will be collected from the open boring by placing 1-1/4-inch diameter well casing in the boring. Groundwater will then be sampled using a clean small diameter bailer, and poured directly into laboratory-supplied containers. Each sample container will then be tightly sealed, labeled, and placed in cold storage for transport to the laboratory under formal chain-of-custody.

Laboratory Analysis of Soil and Water Samples

Approximately 8 soil samples and 8 grab groundwater samples will be collected for laboratory analysis.

One soil and one water sample each from borings GA-1 through GA-4 and from GA-8 will be analyzed for the following parameters:

- USEPA 8015M Total Petroleum Hydrocarbons as Gasoline Range Organics (TPH-GRO)
- USEPA 8260B Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)
- USEPA 8015 Total Petroleum Hydrocarbons as Diesel Range Organics (TPH-DRO)
- USEPA 8015 Total Petroleum Hydrocarbons as Motor Oil Range Organics (TPH-MORO)
- USEPA 8260B Volatile Organic Compounds (VOCs)



- USEPA 6020B (ICP-MS) RCRA Metals (Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, and Silver)
- USEPA 7470/7471 RCRA Metals-Mercury

One soil and one water sample each from borings GA-5, GA-6, and GA-7 will be analyzed for the following parameters:

- USEPA 8015 Total Petroleum Hydrocarbons as Diesel Range Organics (TPH-DRO)
- USEPA 8015 Total Petroleum Hydrocarbons as Motor Oil Range Organics (TPH-MORO)

Also, soil and water samples with significant positive TPH-DRO or TPH-MORO detections (soil >100 mg/kg; water >1,000 ug/l) will be analyzed for the following parameters:

■ USEPA 8270 Semi-Volatile Organic Compounds (SVOCs)

All analyses will be conducted by a State-certified analytical laboratory with two-week turnaround on results.

Preparation of Summary Report

A final SGI report of findings will be prepared for submittal to Alameda County Department of Environmental Health. This report will describe all investigative methods and results, and will include tabulated laboratory analytical results, as well as laboratory reports and chain-of-custody records.

Given the relatively low contaminant impacts currently identified and the clear lack of receptors in the site region, we expect that if the results of the proposed SGI show results that are similar to, or lower than, previous results, with no significant additional impacts, then ACDEH will grant regulatory closure for this site.



We appreciate the opportunity to present this report and workplan for your review. Please call if you have any questions or require additional information.

Very truly yours,

James E. Gribi Registered Geologist

California No. 5843

JEG:ct Enclosure

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FIGURES



