



FIDELITY ROOF COMPANY

September 21, 2010

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Alameda County
Environmental Health

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

Attention: Mark Detterman

Subject: Soil and Groundwater Investigation Workplan
1075 40th Street, Oakland, CA 94608
ACDEH Site No. RO000186

Ladies and Gentlemen:

Attached please find a copy of the *Soil and Groundwater Investigation Workplan, Fidelity Roof Company UST Site, 1075 40th Street, Oakland, CA 94608*, prepared by Gribi Associates. 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.

Very truly yours,

Monte M. Upshaw
Chairman
Fidelity Roof Company



September 21, 2010

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

Attention: Mark Detterman

Subject: Soil and Groundwater Investigation Workplan
Fidelity Roof UST Site
1075 40th Street, Oakland, California
ACDEH Fuel Leak Case: RO0000186; Global ID: T0600102117

Ladies and Gentlemen:

Gribi Associates is pleased to submit this workplan on behalf of Fidelity Roof Company for the underground storage tank (UST) site located at 1075 40th Street in Oakland, California (Site) (see Figure 1 and Figure 2). This workplan addresses specific data deficiencies summarized in the March 23, 2009 letter from your office. Specific tasks proposed herein include: (1) The installation of one groundwater monitoring well, MW-7, in the approximate location of former well MW-3 to assess remediation effectiveness; (2) The drilling and sampling of approximately eight investigative soil borings, to include four borings in the former UST source area to assess vertical hydrocarbon impacts and four downgradient borings to assess lateral MTBE impacts; and (3) The collection and analysis of three soil gas samples adjacent to the Site building at the former UST source area to assess possible vapor intrusion concerns. The goal of these activities will be to provide additional site characterization as necessary to achieve regulatory closure of this site.

The March 23, 2009 letter from Alameda County Environmental Health (ACEH) includes five technical comments, some of which we concur with and others of which we do not. With this in mind, we submitted a *Closure Request Report* on February 3, 2010 providing a technical rationale for granting "low-risk" regulatory closure of the Site. ACEH has not responded to this closure request report; thus, rather than waiting for ACEH response, we have prepared this workplan to address concerns in the March 23, 2009 letter from ACEH. It is our hope that results of the investigative activities proposed herein will confirm the technical rationale for closing this Site.

SITE DESCRIPTION AND BACKGROUND

General Site Description

The site is located in a mixed commercial and residential area of Oakland, immediately adjacent to the east Emeryville city border. The site is bordered to the south by Yerba Buena Avenue followed by residential properties, to the east by residential properties, to the west by commercial and residential properties, and to the north by 40th Street followed by commercial and residential properties. The site is currently used as a company yard and offices for Fidelity Roof Company.

Subsurface soils at the site and in the site area generally consist of clays, with occasional thin, discontinuous silts, sands, and gravels. Groundwater at the site is generally encountered at depths ranging from 5 to 10 feet below surface grade.

UST Removal Activities

On December 19, 1995, Tank Protect Engineering, Inc. removed one 1,000-gallon diesel UST and one 500-gallon gasoline UST from a single excavation cavity on the southeast corner of the property. Soil sample analytical results indicated minimal soil hydrocarbon impacts beneath the 1,000-gallon UST. On September 12, 1996, All Environmental, Inc. (AEI) drilled and sampled four soil borings, SB-1 through SB-4, near the former UST excavation. Analytical results from the subsurface investigation revealed significant soil hydrocarbon impacts east and west of the UST excavation cavity.

On October 25, 1996, AEI extended the excavation cavity laterally seven feet to the south and 12 feet to the west. Soil was removed to a depth of nine feet below ground surface. The dispenser island and associated piping were also removed. Analyses of the soil samples collected from the excavation sidewalls indicated up to 150 milligrams per kilogram (mg/kg) of TPH-G, 16 mg/kg of benzene, and 300 mg/kg of TPH-D remained within the western excavation sidewall.

Site Investigation Activities

On March 6, 1997, AEI installed three groundwater monitoring wells, MW-1, MW-2, and MW-3. Significant groundwater hydrocarbon impacts were reported for well MW-3, located approximately ten feet west-northwest from the former fuel dispenser island. Low to nondetectable hydrocarbon impacts were reported in groundwater samples from wells MW-1 and MW-2, located south and north, respectively, from the former UST excavation cavity.

On November 4, 1998, AEI drilled and sampled six additional soil borings, SB-1 through SB-6, south and west from the former excavation cavity. An elevated concentration of diesel-range hydrocarbons was noted in a grab groundwater sample from a southerly boring. Groundwater analytical results from west borings showed no significant hydrocarbon impacts.

On May 6, 2004, AEI installed one vapor extraction well, VE-1, and two air sparge wells, AS-1 and AS-1, at the site. In addition, six shallow drive point small diameter monitoring wells, DP-1 through DP-6, were installed on May 13, 2004 using direct push technology. On May 19 and 20, 2004, AEI conducted a soil vapor extraction/air sparge pilot test using newly-installed wells. The results of this pilot test and recommendations for remediation are summarized in AEI's *Soil Vapor Extraction and Air Sparge Pilot Test Report*, dated August 6, 2004.

Between March 8 and March 13, 2006, AEI conducted a five-day high vacuum dual-phase (SVE and groundwater extraction) extraction (HVDPE) event at the site. On March 8, 2006, extraction began on well MW-3. Total influent hydrocarbon concentrations ranged from approximately 156 part per million by volume (ppmv) to 355 ppmv. The total system flow rate ranged from 32 to 50 standard cubic feet per minute (scfm). Extraction well VE-1 and monitoring well MW-2 were connected to the system on March 10, 2006. Total influent hydrocarbon concentrations ranged from approximately 427 to 612 ppmv. The total system flow rate ranged from 108 to 124 scfm. Hydrocarbon concentrations stabilized in the 450 to 500 ppmv range until the end of the day on March 12, 2006 when the concentrations fell to about 340 ppmv. By the last day of the event, concentrations stabilized in the 150 to 200 ppmv range. Mass removal estimates using field data indicated a total of approximately 58.4 pounds of hydrocarbons were recovered. With a 97% system uptime, this equals approximately 12.65 pounds per day (lb/day) of vapor phase hydrocarbons recovered. AEI estimated the approximate total mass of hydrocarbons in the smear zone (from approximately 5.5 to 12 feet bgs) to be 1,821 pounds, or 299 gallons.

On December 14, 2006, AEI installed two additional groundwater monitoring wells, MW-5 and MW-6, approximately 50 feet northwest, in an expected downgradient groundwater flow direction, from the former UST cavity. Soil and groundwater analytical results from these wells showed low to nondetectable hydrocarbon impacts.

Recent Site Investigation and Remediation Activities

Review of available site documents showed two distinct hydrocarbon plume areas associated with this site (see Figure 3): (1) An easterly primarily groundwater MTBE/TBA plume that extends downgradient (northwest) from the former UST tank area; and (2) A westerly soil and groundwater hydrocarbon plume extending downgradient from the former fuel dispenser area. Due to the low permeability soils beneath the site, both plumes appeared to be fairly small and concentrated. The soil and groundwater impacts associated with the westerly fuel dispenser plume included gasoline-range hydrocarbons above regulatory screening levels, and free phase hydrocarbons (free product) in a single well, MW-3. Remediation of the free product would be required prior to obtaining regulatory site closure.

To address free-product and associated soil and groundwater impacts in the vicinity of MW-3, Gribi Associates submitted the *Workplan to Conduct Site Remediation Activities* and the *Addendum to Workplan to Conduct Site Remediation Activities* to the Alameda County Department of Environmental Health (ACDEH) on April 3, 2007 and June 7, 2007, respectively. This workplan and workplan addendum proposed: (1) The drilling of approximately four soil

borings in the former UST source area; (2) The decommissioning of seven site wells within the planned excavation area; (3) The excavation and offsite disposal of hydrocarbon-impacted soil and groundwater immediately west from the former UST excavation cavity; and (4) Conducting verification soil and groundwater sampling to assess remediation effectiveness. The workplan and workplan addendum were approved by the ACDEH on May 23, 2007 and August 8, 2007, respectively.

Seven site wells, MW-3, AS-1, AS-2, DP-3, DP-4, DP-5 and DP-6, were decommissioned on November 23, 2007. These decommissioned wells, which were pressure grouted, consisted of one 2-inch diameter monitoring well (MW-3), four 3/4-inch diameter monitoring wells (DP-3 through DP-6), and two 2-inch remediation wells (AS-1 and AS-2).

On November 27, 2007, four investigative soil borings, B-1 through B-4, were drilled to depths ranging from approximately 16 feet to 30 feet in depth using direct-push hydraulically-driven soil coring equipment. Soils encountered in boring B-1 through B-4 were generally similar, consisting primarily of silty gravel fill material to a depth of approximately 8 feet below surface, followed by silty clays to total boring depths. Groundwater was encountered in all borings at a depth of approximately 8 feet below surface grade. Attempts to collect deeper water samples by hydropunching variously from 21 feet to 30 feet in depth were unsuccessful and yielded no water in all four borings. Moderate hydrocarbon staining and odors were noted in soils in all four borings at the fill/native interface, from about 8 feet to 10 feet below surface grade. Soils below 10 feet in depth in the four borings did not exhibit significant staining or odors. Soil and groundwater laboratory analytical results for these four borings are summarized on Figure 3 and Figure 6, respectively. Results of the soil boring investigation showed relatively low soil and groundwater hydrocarbon impacts in native soils at the base of the former UST overexcavation cavity. The highest soil and groundwater hydrocarbon impacts were encountered in boring B-2, located beneath the former UST itself in the northeast corner of the former overexcavation cavity. The soil sample collected at 8 feet in depth in B-2 showed 170 mg/kg of TPH-G, 0.087 mg/kg of benzene, and 1.4 mg/kg of MTBE. Soil samples collected at 12 feet and 16 feet in depth showed low concentrations of TPH-G, but did show respective benzene concentrations of 1.1 mg/kg and 1.1 mg/kg, and respective MTBE concentrations of 6.5 mg/kg and 3.8 mg/kg. The grab groundwater sample from boring B-2 showed 320 ug/l of TPH-G, 4.6 ug/l of benzene, and 180 ug/l of MTBE. These concentrations are all above the San Francisco Bay Regional Water Quality Control Board's (RWQCB's) drinking water Environmental Screening Levels (ESLs) for TPH-G, benzene, and MTBE; however, they are generally below nondrinking water ESLs. Groundwater below the site is not currently a drinking water source, and there is little expectation that groundwater below the site would be used for drinking water source in the future.

Soil excavation and disposal activities and confirmation soil sampling activities were conducted between March 10, 2008 and March 12, 2008. Groundwater removal and excavation backfill and resurfacing activities were conducted between March 18, 2008 and March 25, 2008. A total of 282 tons of hydrocarbon impacted soil was excavated and disposed of at the West Contra Costa County Landfill in Richmond, California, and approximately 2,500 gallons of hydrocarbon

impacted groundwater was removed and disposed of at the In Strat facility in Rio Vista California. Confirmation soil sample laboratory analytical results are summarized on Figure 4, and post-remediation soil and groundwater hydrocarbon impacts are summarized on Figure 5 and 6, respectively. Excavation pit sidewall soil samples, collected in the groundwater hydrocarbon “smear zone” at about 10 feet in depth, showed low to nondetectable concentrations of hydrocarbon constituents, with the highest TPH-G and benzene concentrations being 73 mg/kg and 0.033 mg/kg, respectively. Excavation pit bottom soil samples, collected at 12 feet in depth, showed low to nondetectable concentrations of hydrocarbon constituents, with the highest TPH-G and benzene concentrations being 170 mg/kg and 0.012 mg/kg, respectively. While the highest TPH-G soil concentration (170 mg/kg) is above drinking water soil ESL of 100 mg/kg, this appears to be a laterally isolated occurrence at 12 feet in depth. In addition, the highest benzene soil concentration (0.033 mg/kg) is below the drinking water soil ESL of 0.044 mg/kg. Thus, residual soil hydrocarbon impacts in the excavation area appear to be minimal and do not pose a significant environmental or human health risk.

The grab groundwater sample from the water holding tank showed 240 ug/L of TPH-G, 440 ug/L of TPH-D, and no detectable benzene. While the TPH-G and TPH-D concentrations are above the drinking water ESL for TPH-G and TPH-D of 83 ug/L, the lack of detectable benzene in this sample would tend to reduce the risk posed by this groundwater. Also, groundwater below the site is not currently a drinking water source, and there is little expectation that groundwater below the site would be used for drinking water source in the future.

Results of source removal activities were reported in *Report of Source Removal Activities*, (Gribi Associates, April 22, 2008). Based on source removal activities, this report recommended no additional investigation or remediation in this area of the site.

Quarterly groundwater monitoring has been conducted for site wells since 2001. Results from the most recent groundwater monitoring event, along with grab groundwater hydrocarbon results from laboratory results from November 2007 soil borings are summarized on Figure 6. Results of this and previous monitoring events seem to indicate: (1) A general west-northwesterly trending groundwater flow gradient beneath the site; and (2) A relatively small groundwater MTBE/TBA plume extending 30 to 40 feet northwest from the former UST area.

PROJECT APPROACH

The March 23, 2009 letter from Alameda County Environmental Health (ACEH) includes five technical comments, some of which we concur with and others of which we do not. With this in mind, we submitted a *Closure Request Report* on February 3, 2010 providing a technical rationale for granting “low-risk” regulatory closure of the Site. ACEH has not responded to this closure request report; thus, rather than waiting for ACEH response, we have prepared this workplan to address concerns in the March 23, 2009 letter from ACEH. It is our hope that results of the investigative activities proposed herein will confirm the technical rationale for closing this Site.

The March 29, 2009 letter from ACEH seeks clarification relative to: (1) Whether source area excavation remediation was effective in mitigating free product impacts in MW-3; (2) Definition of the vertical extent of hydrocarbon impacts in the former UST source area; (3) Assessment of soil gas impacts as related to potential vapor intrusion concerns; and (4) Definition of downgradient (west-northwest) MTBE impacts to the Site property line. The ACEH letter requests a workplan to address these data deficiencies.

In order to address these concerns, we recommend the following specific activities: (1) The installation of one groundwater monitoring well, MW-7, in the approximate location of former well MW-3 to assess remediation effectiveness; (2) The drilling and sampling of approximately eight investigative soil borings, to include four borings in the former UST source area to assess vertical hydrocarbon impacts and four downgradient borings to assess lateral MTBE impacts; and (3) The collection and analysis of three soil gas samples adjacent to the Site building at the former UST source area to assess possible vapor intrusion concerns.

WORKPLAN ELEMENTS

The proposed investigation will include the following workplan elements. All activities will be conducted in accordance with the approved workplan and with applicable State and Federal guidelines and statutes.

Prefield Activities

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

Location of Well, Borings, and Soil Gas Samples

The proposed well, boring, and soil gas sample locations are shown on Figure 7. New well MW-7 will be sited in the approximate location of former boring MW-3.

The four source area borings, B-201 through B-204, will include two borings (B-201 and B-202) in the former UST overexcavation cavity, and two borings (B-203 and B-204) approximately 25 feet downgradient (west-northwest) from the former UST overexcavation cavity. Downgradient borings B-205 through B-208 will include one boring (B-205) between wells MW-5 and MW-6, two borings (B-206 and B-207) about 25 feet downgradient from well MW-6 and B-205, and one boring (B-208) near the downgradient Site property line.

The three soil gas samples, SG-1, SG-2, and SG-3, will be sited adjacent to the Site building immediately east of the former UST excavation cavity.

Installation of Groundwater Monitoring Well MW-7

Well installation activities will be conducted by a State-licensed drilling contractor using hollow stem auger equipment. The well boring will be drilled to a total depth of approximately 20 feet below surface grade (groundwater is expected to be encountered at approximately eight feet in depth). Soils from the well borings will be placed in closed DOT-approved 55-gallon drums pending laboratory results.

Soil samples will be collected from the well boring at approximately five-foot intervals starting at approximately five feet below surface grade and extending down to total depth. Undisturbed soils will be sampled in advance of the auger as follows: (1) A two-inch inside diameter California-style split spoon sampler will be driven into undisturbed soil ahead of the drill bit; (2) The sampler will be raised quickly to the surface and the brass liners exposed; (3) The brass liner containing the most undisturbed soil will be quickly sealed with aluminum foil and plastic end caps, labeled, and wrapped tightly with tape; and (4) The sealed soil sample will be placed immediately in a cooler with crushed ice for transport to the analytical laboratory under formal chain-of-custody. All 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. All downhole drilling equipment, including auger and drill bit, will be steam cleaned before and after drilling the well boring. Steam cleaning rinseate will be contained in sealed drums pending laboratory results.

The groundwater monitoring well will be constructed using 2-inch diameter Schedule 40 threaded PVC casing according to the following specifications: (1) 0.020-inch slotted well casing will be placed from approximately 20 feet to 5 feet in depth (exact screen depths will be determined in the field based on occurrence of first groundwater); (2) No. 3 Lonestar (or equivalent) filter sand will be placed around the casing to a depth of approximately 4 feet below grade; (3) A one foot bentonite seal will be placed above the filter sand to approximately 3 feet below grade; and (4) The remaining annulus will be grouted using a cement/sand slurry (bentonite less than five percent) to approximate grade. The top of the well will be enclosed in a traffic-rated locking well box set in concrete slightly above surface grade.

Well Development and Sampling

After allowing the cement seal to cure for at least 48 hours, newly-installed well MW-7 will be developed by surging and pumping groundwater from the well until pumped groundwater is clear and free of fines. During well development, groundwater will be monitored periodically for pH, specific conductance, temperature, visible clarity, and odor. If possible, at least 10 gallons will be pumped from each well during well development.

At least 48 hours after well development, the newly-installed groundwater monitoring well will be purged and sampled using either a clean disposable PVC bailer or a clean purge pump. Wells will be purged of at least three well volumes before sampling. During well purging, groundwater will be monitored periodically for pH, specific conductance, temperature, odor, and visible clarity. After these parameters have stabilized, groundwater will be sampled in the following manner: (1) Laboratory supplied containers will be completely filled directly from the bailer or effluent hose with a minimum of agitation; (2) After making sure that no air bubbles are present (when applicable), each container will be tightly sealed; and (3) Each container will be labeled and placed in cold storage for transport to the analytical laboratory under formal chain-of-custody.

All purged groundwater generated during well development and sampling will be stored on site in a sealed container pending groundwater analytical results. All sampling equipment will be thoroughly cleaned and decontaminated between each sample collection by triple rinsing as described above.

Determination of Groundwater Potentiometric Gradient

Following well installation, the wellhead elevation will be surveyed by a State-licensed land surveyor in accordance with State Geotracker requirements. Prior to purging and sampling, groundwater depths in all Site wells will be measured to the nearest 0.01 foot using an electronic probe. These data will then be used to calculate groundwater potentiometric gradient.

Drilling and Sampling of Investigative Borings

Boring activities will be conducted by a State-licensed drilling contractor using direct-push coring equipment. The investigative borings will be drilled to approximately 30 feet in depth using direct-push hydraulically-driven soil coring equipment. For each boring, continuous 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.

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 in an acetate liner, which will be cut to the desired length (typically four to six inches), capped with teflon tape and plastic end caps, labeled and placed in cold storage pending transport to a 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 encountered groundwater (expected at approximately eight feet in depth). An additional deeper hydropunch groundwater sample will also be attempted in each of the borings. The shallow grab groundwater samples will be collected from the open boring, and the deeper groundwater samples will be collected using a hydropunch-type sampler. The open hole grab groundwater sample will be collected by placing 1-1/4-inch diameter well casing in the boring. The hydropunch-type groundwater sampling method involves pushing a four-foot screened section sheathed in an outer casing to the desired depth, expected to be approximately 25 to 30 feet in depth, and then retracting the outer casing to expose the screened interval. With both sampling methods, 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.

Note that if specific permeable aquifer zones (gravels, sands or sandy silts) are encountered during lithologic logging, then a hydropunch groundwater sample will be attempted in a separate boring located directly adjacent to the lithologic boring.

Laboratory Analysis of Soil and Water Samples

Approximately 30 soil samples (three per boring) and ten water samples (two per boring/well) will be analyzed for the following parameters.

USEPA 8015M Total Petroleum Hydrocarbons as Diesel (TPH-D)
USEPA 8260B Total Petroleum Hydrocarbons ad Gasoline (TPH-G)
USEPA 8260B Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)
USEPA 8260B Oxygenates & Lead Scavengers (TBA, MTBE, DIPE, ETBE,
TAME, EDB, & 1,2-DCA)

All samples will be analyzed by a state-certified laboratory with standard turn around on laboratory results.

Soil Gas Sampling and Laboratory Analyses

Approximately three soil vapor samples will be collected to assess potential vapor intrusion concerns relative to the Robbins Mercantile building. All activities will be conducted in accordance with applicable local, State, and Federal guidelines and statutes.

Soil vapor sampling and analysis will be conducted by a qualified scientist, and will generally include: (1) Drilling a small diameter access hole through the asphalt/concrete slab using a hand drill; (2) Driving a steel drive point to approximately 5 feet in depth using a slide hammer; (3) Collecting one soil gas sample using a Summa canister; and (4) Repairing the concrete slab to

match existing conditions. After driving the drive point to 5 feet in depth, it will then be retracted several inches to expose the subsurface for vapor sampling. Bentonite powder will be placed around the vapor probe at the ground surface and hydrated. A waiting period of approximately 30 minutes will then be given to allow time for formational equilibrium.

The soil vapor sample system will then be purged of approximately 3 times the volume of soil vapor prior to sample collection. A representative soil gas sample will then be collected using a 6-liter, laboratory clean-certified Summa Canister (equipped with pressure gauge) holding an initial vacuum of approximately 29 inches of mercury (in Hg). A calibrated flow controller will be used to ensure a sampling duration of at least a one hour period, while maintaining a final Summa Cannister vacuum of approximately 5 inches Hg. During sampling, a hood will be placed over the sampling apparatus and a surrogate chemical, Difluoroethane in the form of dust remover aerosol, will be sprayed on the sampling apparatus periodically to assess possible sample equipment leaks.

After completion of sampling activities, the vapor samples will be sealed, labeled, and transported under chain-of-custody to a California-certified laboratory for analysis. The sample locations will be grouted to match surface grade.

The three soil vapor samples will be analyzed for the following parameters with appropriate detection levels which are below regulatory ESLs.

USEPA TO-14 Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)

All analyses will be conducted by a California-certified analytical laboratory, with standard turnaround on results.

Preparation of Summary Report

A report summarizing investigative activities and results will be prepared for submittal to ACEH. This report will describe all investigative methods and results, and will include tabulated laboratory results and graphical depictions of result.

Management of Investigative Spoils

It is estimated that well drilling, installation, and sampling activities will generate approximately four 55-gallon drums of soil and one 55-gallon drums of purge and rinse water. If found to be contaminated, these spoils will be disposed of offsite in accordance with all applicable State and Federal guidelines and statutes.

PROJECT SCHEDULE

Subject to ACEH approval, completion of proposed activities can be completed within approximately six to eight weeks.

We appreciate this opportunity to provide this report for your review. Please contact us if there are questions or if additional information is required.

Very truly yours,



Matthew A. Rosman
Project Engineer



James E. Gribi
Registered Geologist
California No. 5843

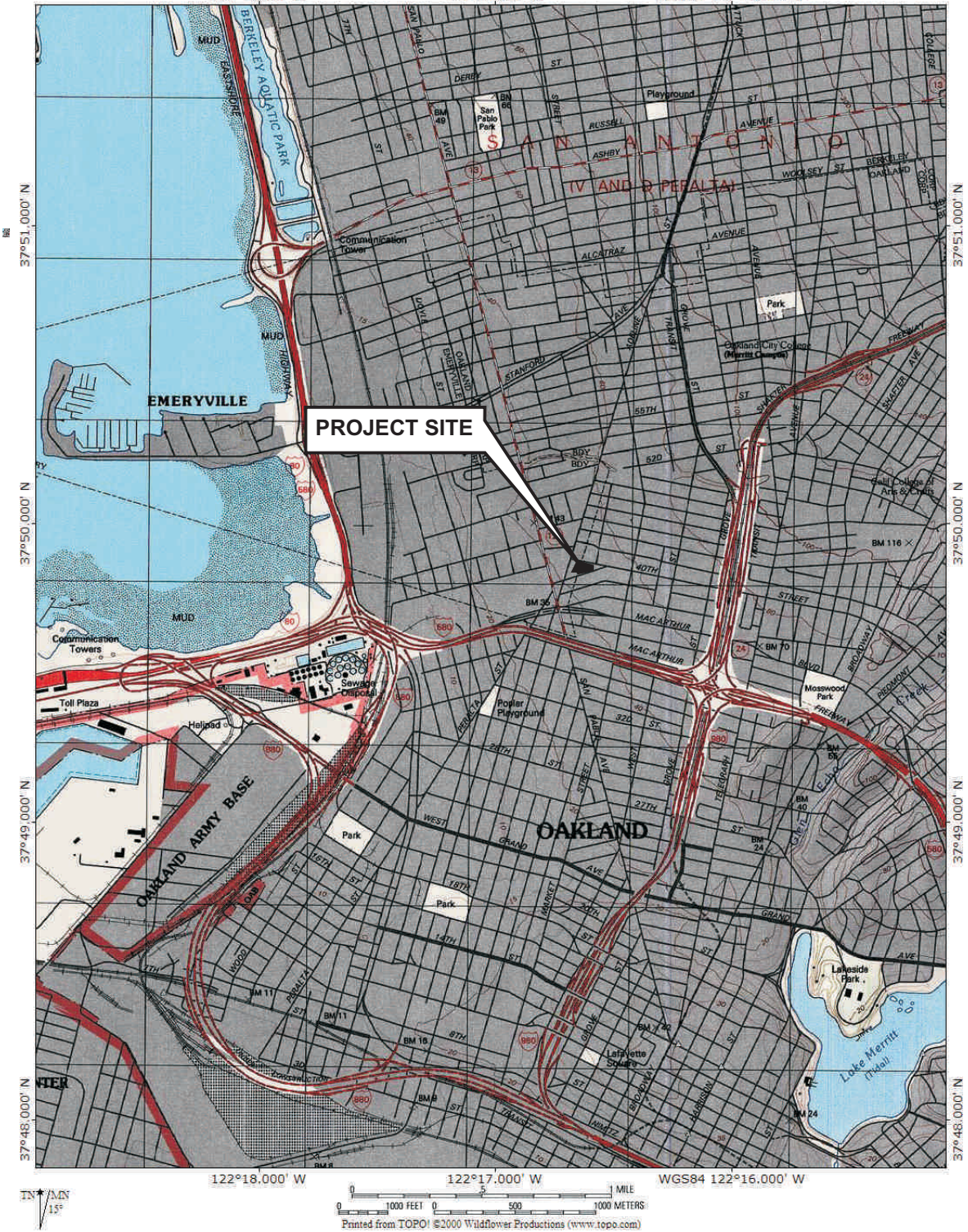


c Monte Upshaw, Fidelity Roof Company

Enclosures: Figure 1: Site Vicinity Map
Figure 2: Site Plan
Figure 3: Pre-Remediation Soil Hydrocarbon Impacts
Figure 4: Results of 2008 Excavation Confirmation Soil Sampling
Figure 5: Post-Remediation Soil Hydrocarbon Impacts
Figure 6: Post-Remediation Groundwater Hydrocarbon Impacts
Figure 7: Proposed Well, Boring, and Soil Gas Sample Locations

FIGURES

TOPO! map printed on 04/03/07 from "California.tpo" and "Untitled.tpg"
 122°18.000' W 122°17.000' W WGS84 122°16.000' W



Printed from TOPO! ©2000 Wildflower Productions (www.topo.com)

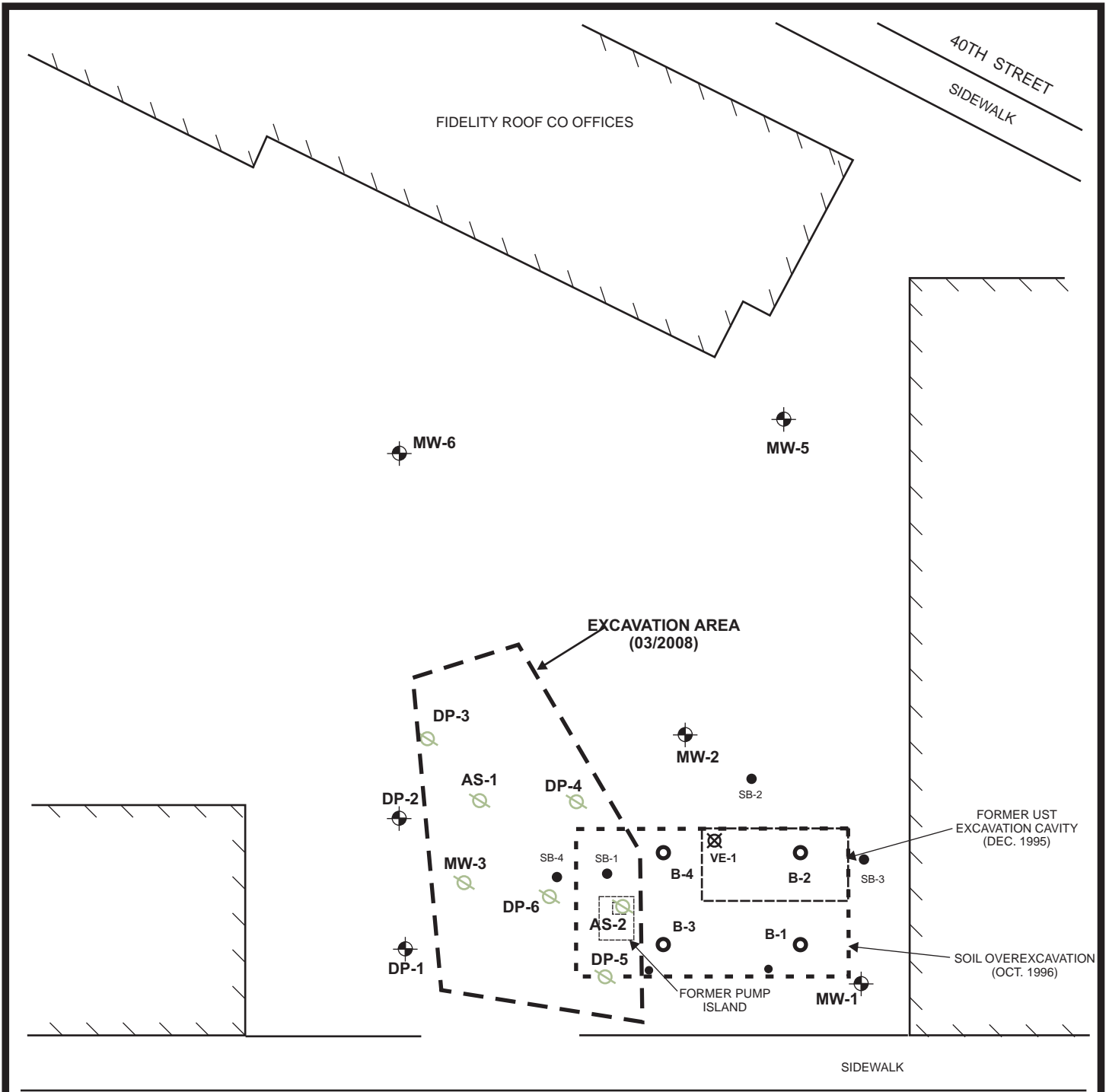
DESIGNED BY:	CHECKED BY:
DRAWN BY: MR	SCALE:
PROJECT NO:	

SITE VICINITY MAP

1075 40TH STREET
OAKLAND, CALIFORNIA

DATE: 08/20/2010 FIGURE: 1

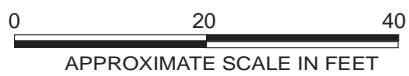




LEGEND	
	- SOIL BORING LOCATION (GRIBI, 11/2007)
	- SOIL BORING/SOIL SAMPLE LOCATION, 1995/1996
	- ABANDONED WELL
	- REMEDIATION WELL
	- GROUNDWATER MONITORING WELL

MW-4

YERBA BUENA AVENUE



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PROJECT NO:	

SITE PLAN

1075 40TH STREET
 OAKLAND, CALIFORNIA

DATE: 08/20/2010 FIGURE: 2

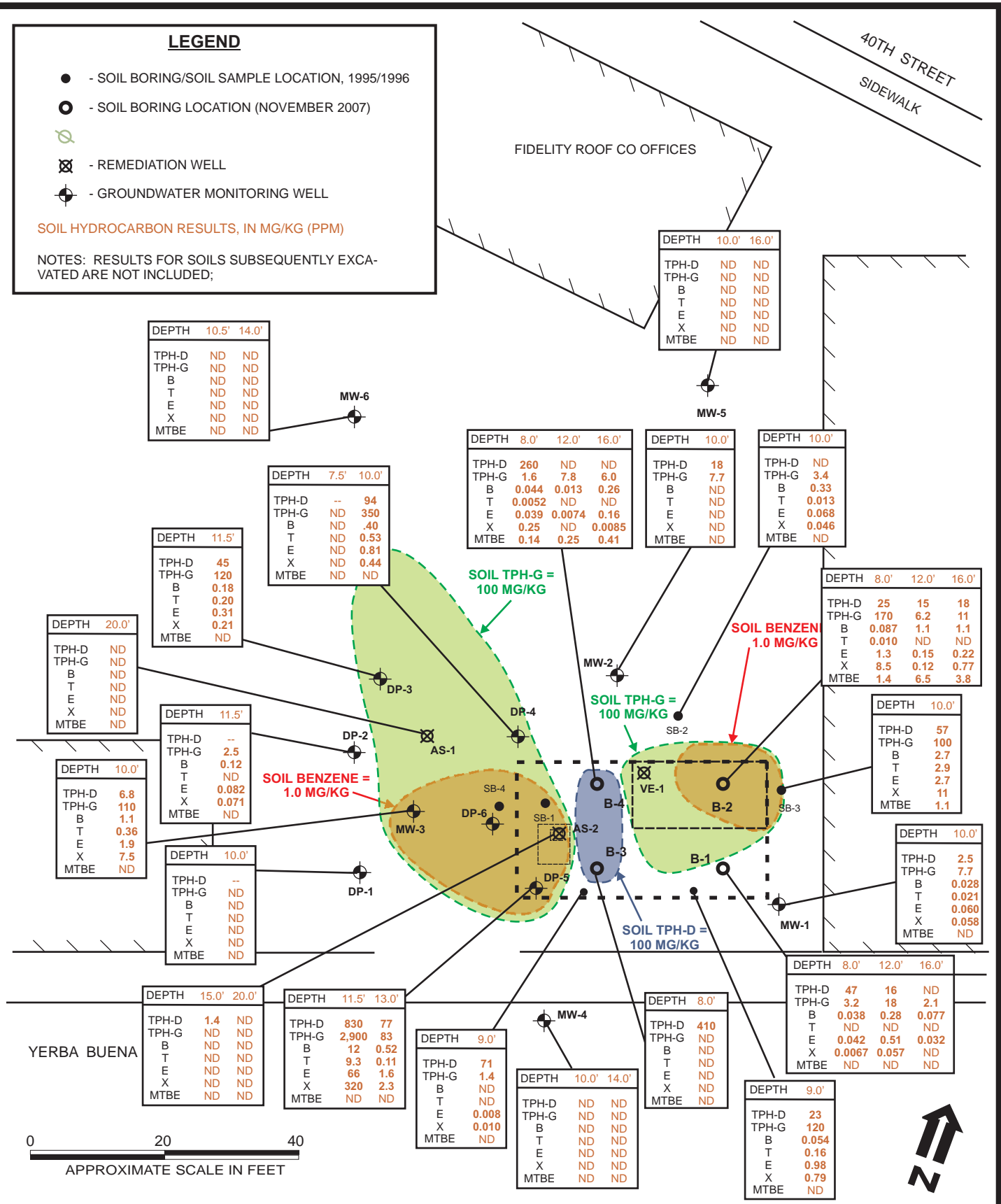


LEGEND

- - SOIL BORING/SOIL SAMPLE LOCATION, 1995/1996
- - SOIL BORING LOCATION (NOVEMBER 2007)
- ⊗ - REMEDIATION WELL
- ⊕ - GROUNDWATER MONITORING WELL

SOIL HYDROCARBON RESULTS, IN MG/KG (PPM)

NOTES: RESULTS FOR SOILS SUBSEQUENTLY EXCAVATED ARE NOT INCLUDED;



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PROJECT NO:	

PRE-REMEDIATION SOIL HYDROCARBON IMPACTS

1075 40TH STREET
OAKLAND, CALIFORNIA

DATE: 08/20/2010	FIGURE: 3
GRIBI	

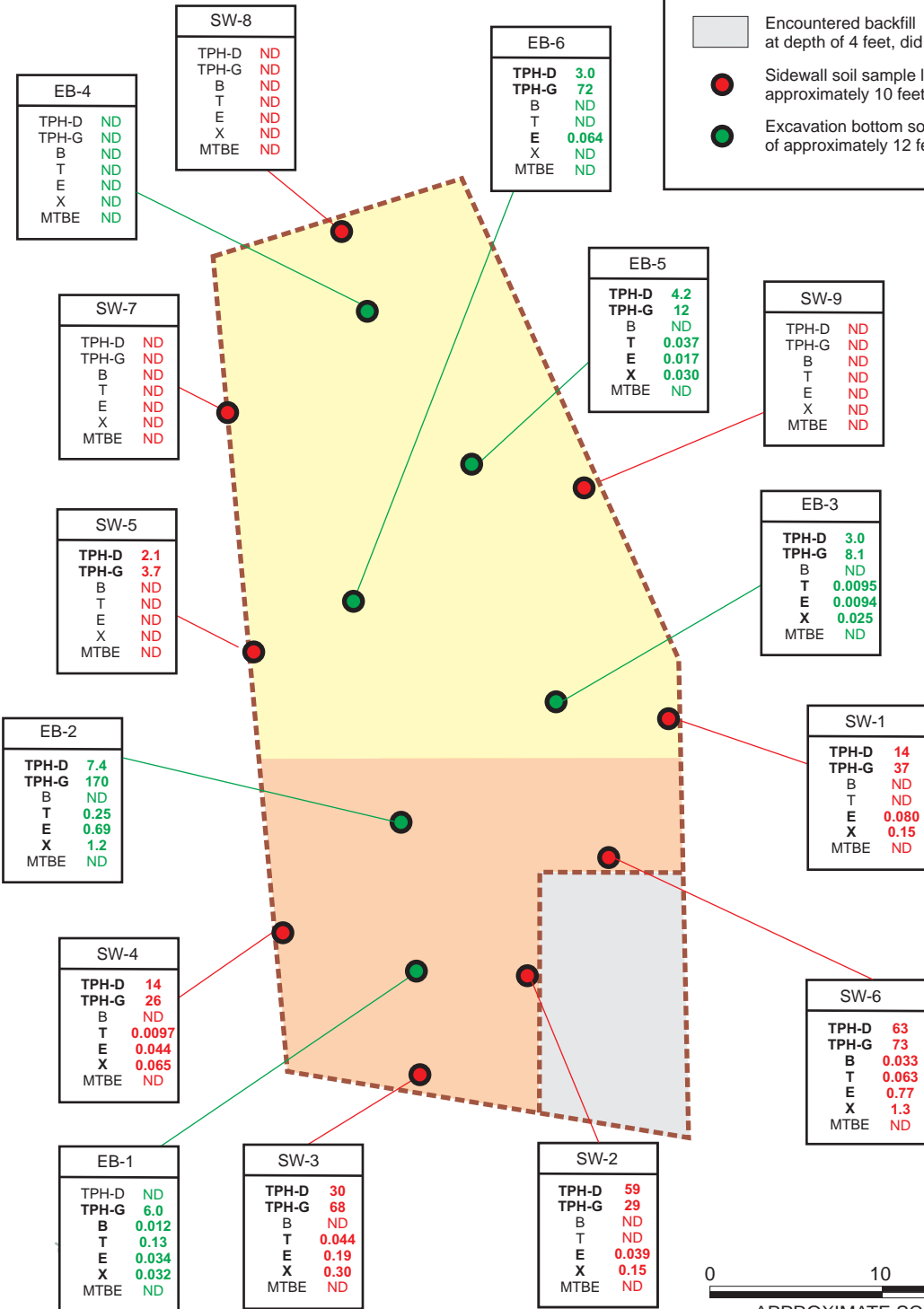
Excavated and disposed of hydrocarbon impacted soils between 8 feet and 12 feet in depth.

Excavated and disposed of hydrocarbon impacted soils between 4 feet and 12 feet in depth.

Encountered backfill from previous soil investigation at depth of 4 feet, did not excavate further.


Sidewall soil sample location. Collected at depth of approximately 10 feet.

Excavation bottom soil sample location. Collected at depth of approximately 12 feet.



0 10 20
APPROXIMATE SCALE IN FEET



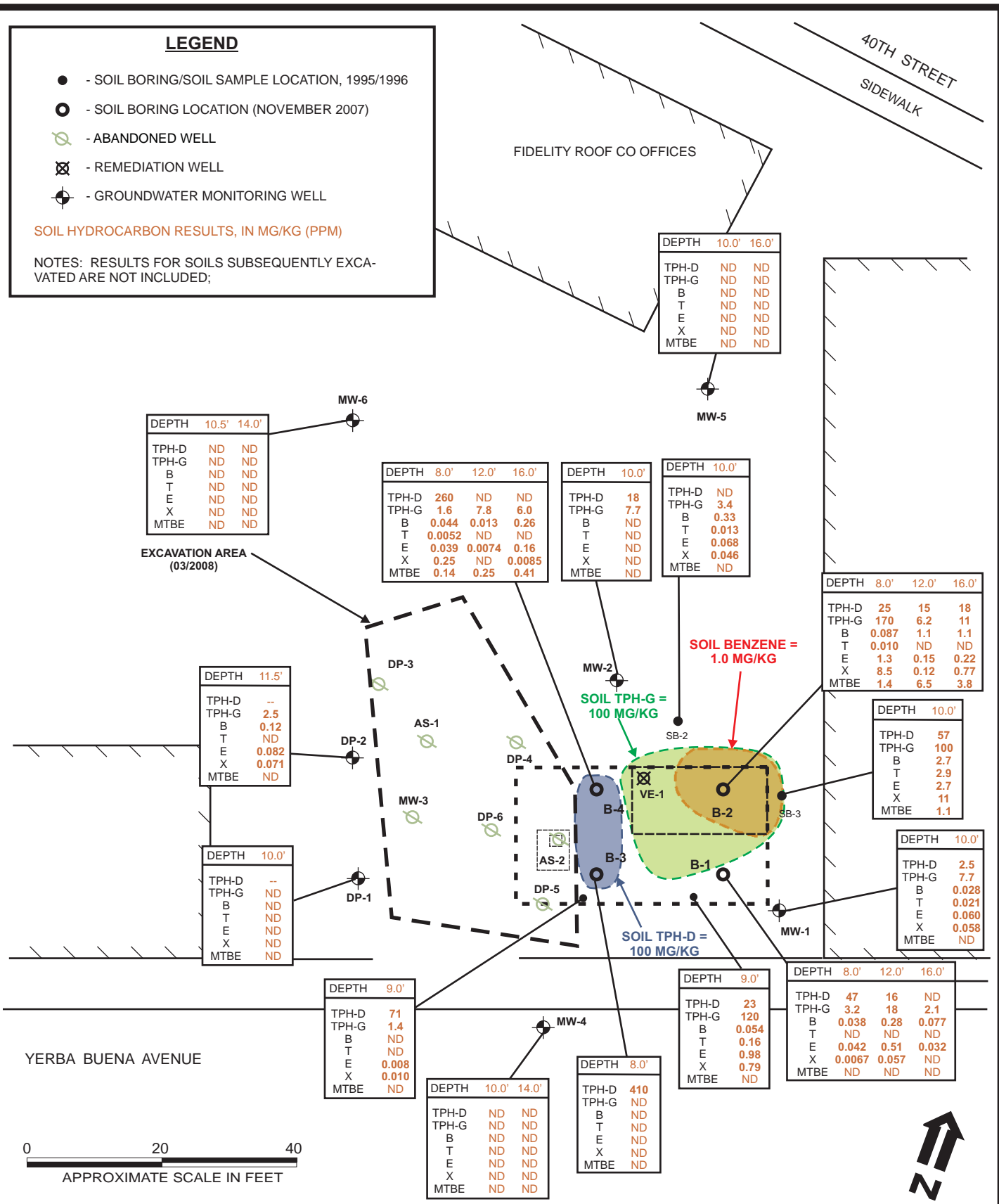
DESIGNED BY:	CHECKED BY:	RESULTS OF 2008 EXCAVATION CONFIRMATION SOIL SAMPLING 1075 40TH STREET OAKLAND, CALIFORNIA	DATE: 08/20/2010	FIGURE: 4
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PROJECT NO:				

LEGEND

- - SOIL BORING/SOIL SAMPLE LOCATION, 1995/1996
- - SOIL BORING LOCATION (NOVEMBER 2007)
- ⊗ - ABANDONED WELL
- ⊗ - REMEDIATION WELL
- ⊕ - GROUNDWATER MONITORING WELL

SOIL HYDROCARBON RESULTS, IN MG/KG (PPM)

NOTES: RESULTS FOR SOILS SUBSEQUENTLY EXCAVATED ARE NOT INCLUDED;



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PROJECT NO:	

POST-REMEDIATION SOIL HYDROCARBON IMPACTS

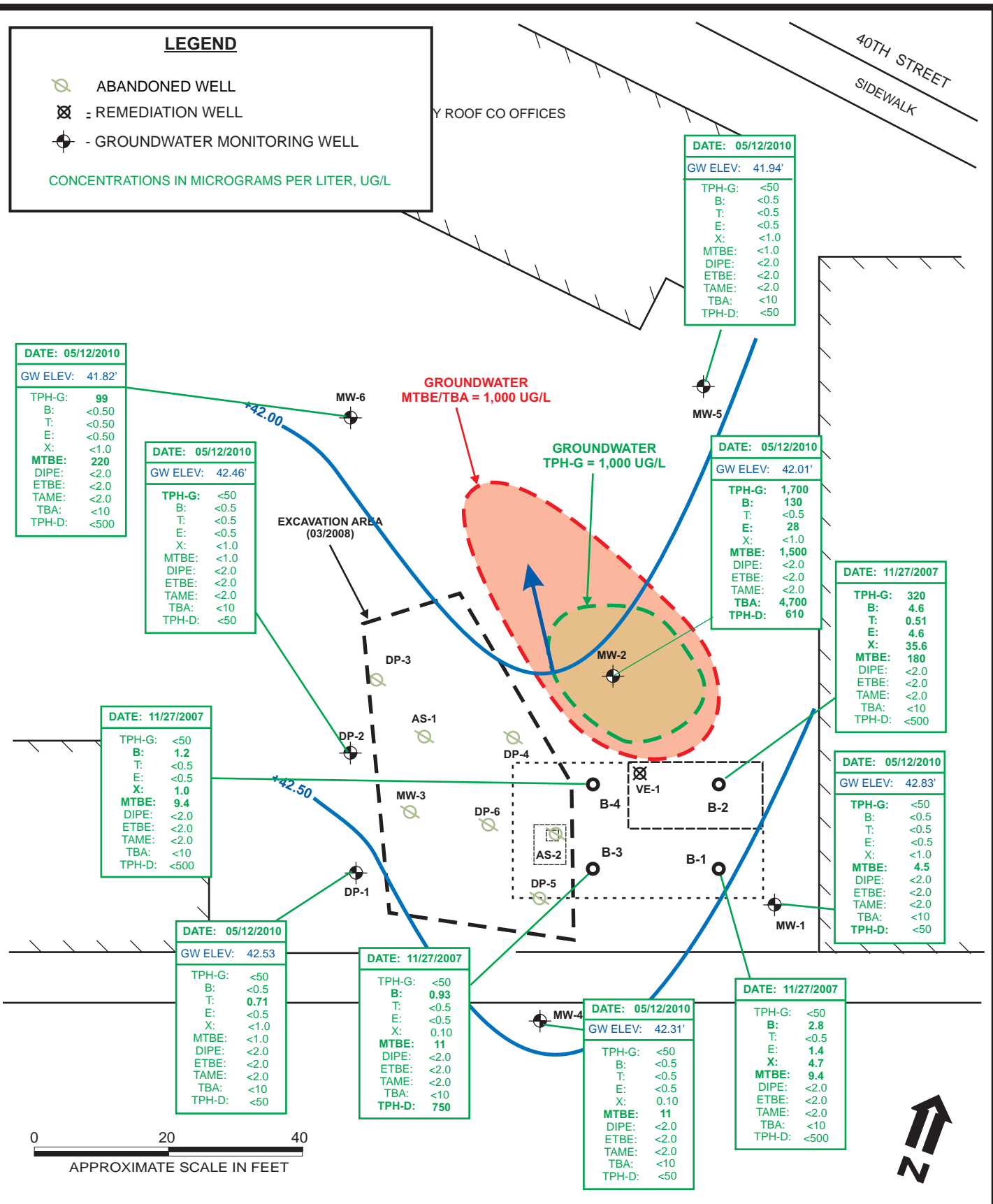
1075 40TH STREET
OAKLAND, CALIFORNIA

DATE: 08/20/2010	FIGURE: 5
GRIBI	

LEGEND

- ABANDONED WELL
- REMEDIATION WELL
- GROUNDWATER MONITORING WELL

CONCENTRATIONS IN MICROGRAMS PER LITER, UG/L

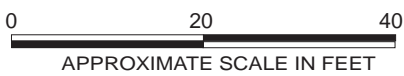
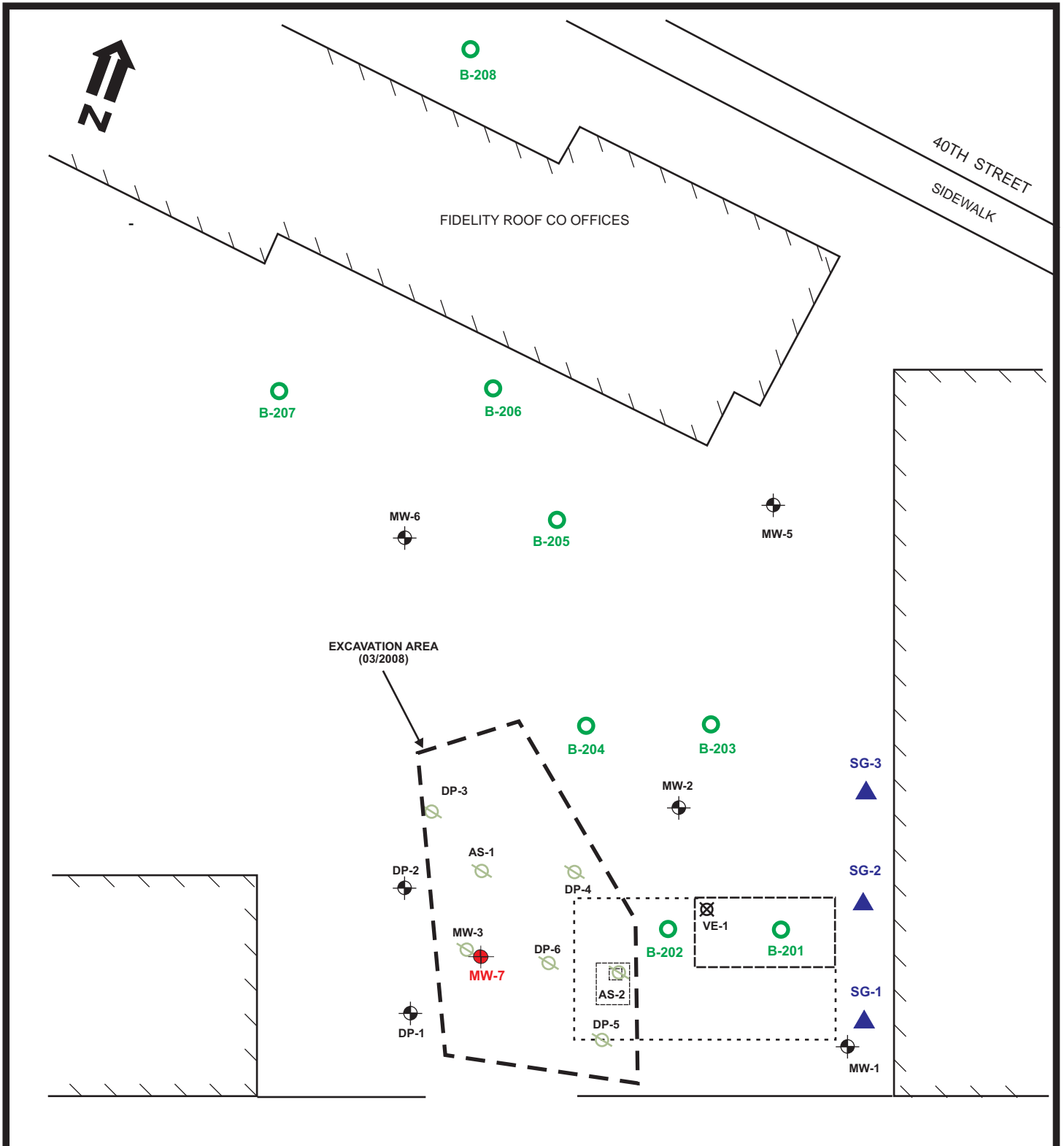


DESIGNED BY:	CHECKED BY:
DRAWN BY: MR	SCALE:
PROJECT NO:	

**POST-REMEDIATION GROUNDWATER
HYDROCARBON IMPACTS**

1075 40TH STREET
OAKLAND, CALIFORNIA

DATE: 08/20/2010	FIGURE: 6



- PROPOSED SOIL BORING LOCATION
- REMEDIATION WELL
- ABANDONED WELL
- PROPOSED GROUNDWATER MONITORING WELL
- GROUNDWATER MONITORING WELL
- MW-4
- PROPOSED SOIL GAS SAMPLE LOCATION
- PROPOSED GROUNDWATER MONITORING WELL

DESIGNED BY:	CHECKED BY:	PROPOSED WELL, BORING, AND SOIL GAS SAMPLE LOCATIONS 1075 40TH STREET OAKLAND, CALIFORNIA	DATE: 08/20/2010	FIGURE: 7	
DRAWN BY: MR	SCALE:				
PROJECT NO:					