GRIBI
ASSOCIATES

April 3, 2007

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

Attention: Barney Chan

Subject: Workplan to Conduct Site Remediation Activities
1075 40th Street, Oakland, CA 94608
ACDEH Site No. RO000186

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 1070 40th Street in Oakland, California (see Figure 1 and Figure 2). Proposed remediation activities will include: (1) Excavation of hydrocarbon-impacted soil and groundwater in the vicinity of the former fuel dispenser and well MW-3; and (2) Implementation of an ozone injection pilot test in the vicinity of well MW-2. The goal of these activities will be to sufficiently remediate the site and obtain regulatory closure for unrestricted (commercial and residential) land use.

PROJECT APPROACH

Based on our review of available site documents, it appears that there are two distinct hydrocarbon plume areas associated with this site, one being a primarily groundwater MTBE plume that extends downgradient (northwest) from the former UST tank area, and the other being a soil and groundwater hydrocarbon plume extending downgradient from the former fuel dispenser area. Due to the low permeability soils beneath the site, both plumes appear to be fairly small and concentrated. MTBE groundwater impacts are above regulatory screening levels and will require some limited remediation. The gasoline hydrocarbon plume associated with the former fuel dispenser area includes soil and groundwater gasoline-range hydrocarbon impacts, particularly Benzene, that are above regulatory screening levels, and free phase hydrocarbons (free product) in well MW-3. Remediation of the free product will be required prior to obtaining regulatory site closure.

In order to move towards regulatory closure of this site, we recommend: (1) Excavation and removal of hydrocarbon-impacted soils and groundwater in the vicinity of free product well MW-3; and (2) Conducting an ozone injection pilot test, to include the installation of five injection wells, and the injection of ozone for approximately four months. Note that the proposed ozone injection pilot test may sufficiently mitigate MTBE groundwater impacts

without the need for additional remediation. Thus, we believe that these tasks, if successful, will result in regulatory closure in a relatively short time frame.

WORKPLAN ELEMENTS

Source Removal

Prefield Activities

Prior to implementing this workplan, written approval will be obtained from the Alameda County Department of Environmental Health (ACDEH). Additionally, permit to abandon site wells MW-3, AS-1, DP-3, DP-4, DP-5, and DP-6 will be obtained from Alameda County Department of Public Works. In addition, the proposed excavation location will be marked with white paint, and Underground Services Alert (USA) will be notified at least 48 hours prior to excavating. Also, a private underground utility locator will clear the proposed excavation location. Prior to initiating excavation activities, a Site Safety Plan will be prepared, and a tailgate safety meeting will be conducted with all site workers.

Well Decommissioning

Prior to beginning excavation activities, wells MW-3, AS-1, DP-3, DP-4, DP-5, and DP-6 will be abandoned in accordance with permit requirements. Based on our understanding of Alameda County Department of Public of Public Works, we expect these well abandonment activities to include pressure grouting of the wells.

Excavation Size and Location

The soil remediation activities will include excavating an area of hydrocarbon-impacted soil measuring approximately 25 feet by 50 feet northwest from the former pump island, as shown on Figure 3. The excavation will be extended to a depth of approximately 11 feet below surface grade, with the top eight feet of assumed clean soil to be stockpiled onsite and reused, and the lower three feet, from eight feet to 12 feet in depth, to be disposed of offsite. The estimated 12-foot soil excavation depth is based on the desire to excavate the groundwater smear zone, which extends from about eight feet to 12 feet in depth beneath the site. Based on these estimations, the proposed volume of soil to be removed for disposal at an approved off-site disposal facility is approximately 190 cubic yards (350 tons). Note that the actual excavation dimensions will vary relative to both depth and aerial extent based on field screening results.

Excavation and Sampling of Source Area

The area to be remediated will be excavated to a depth of about 12 feet below surface grade using an appropriate excavator. We will make every attempt to conduct these activities as rapidly as possible, so as to minimize impacts to the current owner/tenant. Prior to excavating

hydrocarbon-impacted soil shown to be present from approximately eight to 12 feet in depth, the upper eight feet of non-impacted soil will be excavated and stockpiled separately from the impacted soil stockpile to reduce disposal costs. Hydrocarbon-laden soil from eight feet to 12 feet in depth will then be excavated and stockpiled on-site pending sampling and characterization activities. During the excavation process, sidewall soil samples will be field-screened with an organic vapor analyzer (OVA) equipped with a photoionization detector (PID).

Confirmation soil samples will be collected from the finished sidewalls of the excavation to document the extent of soil cleanup. One soil sample will be collected every 20 linear feet along the excavation sidewalls. Additionally, approximately six composite soil stockpile samples will be collected for characterization of the excavated soil stockpile. Sidewall soil samples will be collected from the base of the excavation, near the soil/groundwater interface. Soil samples will be collected directly from the backhoe bucket using the following method: (1) Exposed soil will be scraped away; (2) A clean 2-inch by 6-inch brass tube will be completely filled with undisturbed soil, taking care to minimize excess void in the tube; (3) The tube will then be quickly sealed with aluminum foil and plastic end caps, wrapped tightly with tape and labeled; and (4) The sealed tube will immediately be placed in cold storage for transport to the laboratory.

Upon completion of the soil excavation activities, groundwater and free-phase product that accumulates in the excavation cavity will be removed using a vacuum truck on two separate occasions. After removing groundwater, one to two groundwater samples will be collected for laboratory analysis. For the purposes of this workplan, we assume the removal and disposal of approximately 10,000 gallons of groundwater.

Grab groundwater samples will be collected from the excavation cavity using a clean disposable PVC bailer as follows: (1) Laboratory-supplied containers will be completely filled directly from the bailer with a minimum of agitation; (2) After making sure that no air bubbles are present, each container will then be tightly sealed with a Teflon-lined septum; and (3) Each container will then be labeled and placed in cold storage 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 as described above.

Gribi Associates will document excavation activities, provide technical and logistical oversight and support, and interface with both the Client and regulatory personnel. In addition, Gribi Associates will collect approximately ten soil samples from the excavation cavity and six composite soil samples from excavated soil stockpiles. Soil samples will be analyzed for the following parameters:

USEPA 8015M Total Petroleum Hydrocarbons as Gasoline (TPH-G)
USEPA 8015M Total Petroleum Hydrocarbons as Diesel (TPH-D)
USEPA 8020/602 Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)

USEPA 8260B Oxygenates (DIPE, ETBE, MTBE, TAME, TBA)
USEPA 6010 Total & Soluble Lead (TTLC and STLC)

All analyses will be conducted by a California-certified analytical laboratory with one week turn around on lab results.

Excavation Backfilling and Soil Disposal

Subsequently, the excavation cavity will be backfilled and compacted to match the existing surrounding grade using clean imported fill and the upper eight feet of clean soil initially excavated from the subject area. Finally, following the receipt of laboratory analytical results, the excavated soil will be hauled to an appropriately permitted facility for treatment of petroleum impacted soil. For the purposes of this workplan, we assume the removal, disposal, and replacement of approximately 190 cubic yards (350 tons) of soil.

Ozone Injection Pilot Test

Prefield Activities

Prior to beginning field activities, well permits for the four ozone injection wells will be obtained from Alameda County Department of Public Works. In addition, proposed well 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 well 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 Injection Wells

Proposed locations for the five injection wells (IW-1 through IW-5) are shown on Figure 4. In order to provide overlapping ozone injection coverage of the hydrocarbon-impacted areas, the five wells will be spaced in a grid pattern in the MTBE groundwater plume area, which extends northwest from the northeast corner of the former UST excavation cavity, and includes MW-2.

Drilling and Sampling of Well Borings

Each of the five injection well borings will be drilled by a State-licensed drilling contractor to a total depth approximately 25 feet below grade using at least six-inch diameter hollow stem auger. Soils from each soil boring will be logged by a qualified scientist using sight and smell, and at least one soil sample per well boring will be collected as described previously in this workplan and will be analyzed for TPH-G, BTEX, and Oxygenates. Soil cuttings will be placed in sealed 55-gallon drums (or with the excavated soil from source removal activities, if appropriate) pending laboratory results. All sampling equipment will be thoroughly cleaned and

decontaminated between each sample collection by triple rinsing, as described previously in this workplan.

Installation of Injection Wells

The four injection wells will be constructed inside the hollow stem auger using a one foot length of 1-½-inch diameter bubble diffuser and 3/4-inch threaded blank PVC riser pipe with vitron O-rings. For each of the wells, the diffuser will be set below 24 feet in depth, then surrounded with a fine sand to about 23 feet in depth, time release bentonite to about 21 feet in depth, and concrete grout to surface.

Installation of Delivery Piping and Injection Equipment

Delivery piping, consisting of small-diameter Teflon tubing, will be installed below ground, in narrow (six-inch width) trenching.

The ozone generation equipment will consist of a 110-volt PEG Phoenix injection unit that includes an ozone generator, compressor, controller, and valves. This unit will supply an ozone/air mixture under pressure to the five individual injection wells according to a set timed sequence. This unit will include an ozone detector with automatic shut down in the event of an ozone leak.

Operation of Remediation System

The ozone injection remediation system will be operated continuously for approximately four months. During operation, the remediation system will be maintained and monitored regularly, beginning with bi-weekly visits for the first month, followed by weekly and semi-weekly visits as needed for the three-month duration. During monitoring, possible ozone leakage from the ozone generating system will be monitored to insure system integrity.

Monitoring of Remediation Effectiveness

In order to assess remediation effectiveness, site MTBE plume wells MW-2, MW-6, and VE-1 will be monitored periodically, beginning with semi-weekly monitorings for the first month, and followed by monthly monitorings for the four-month duration of the remediation. Groundwater monitoring will be conducted in accordance with applicable sampling protocols, and will include sampling of groundwater for Dissolved Oxygen (field parameter), TPH-G, BTEX, and Oxygenates analysis.

Project Reporting

Reports to be submitted to the ACDEH will include: (1) A report documenting source removal activities and results; (2) A report documenting ozone injection system installation and startup;

and (3) a report documenting the full pilot test. The report will also include recommendations for additional activities.

Project Schedule

Subject ACDEH and UST Cleanup Fund approval, Gribi Associates is prepared to begin project activities immediately, with expected completion of source removal activities within about six weeks, and completion of the ozone injection pilot test in about five months.

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

Very truly yours,

James E. Gribi
Registered Geologist
California No. 5843

JEG/ct
Enclosure

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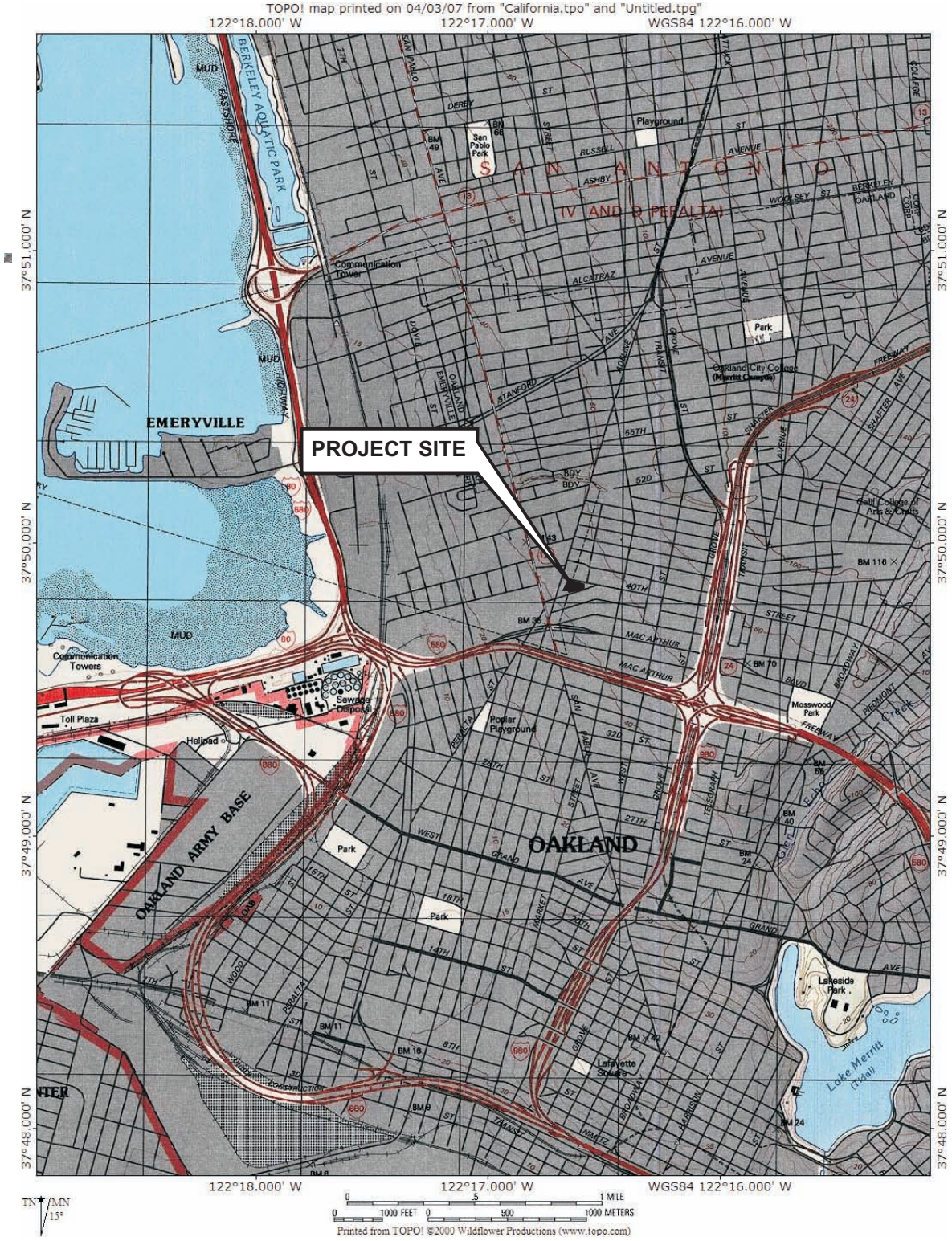
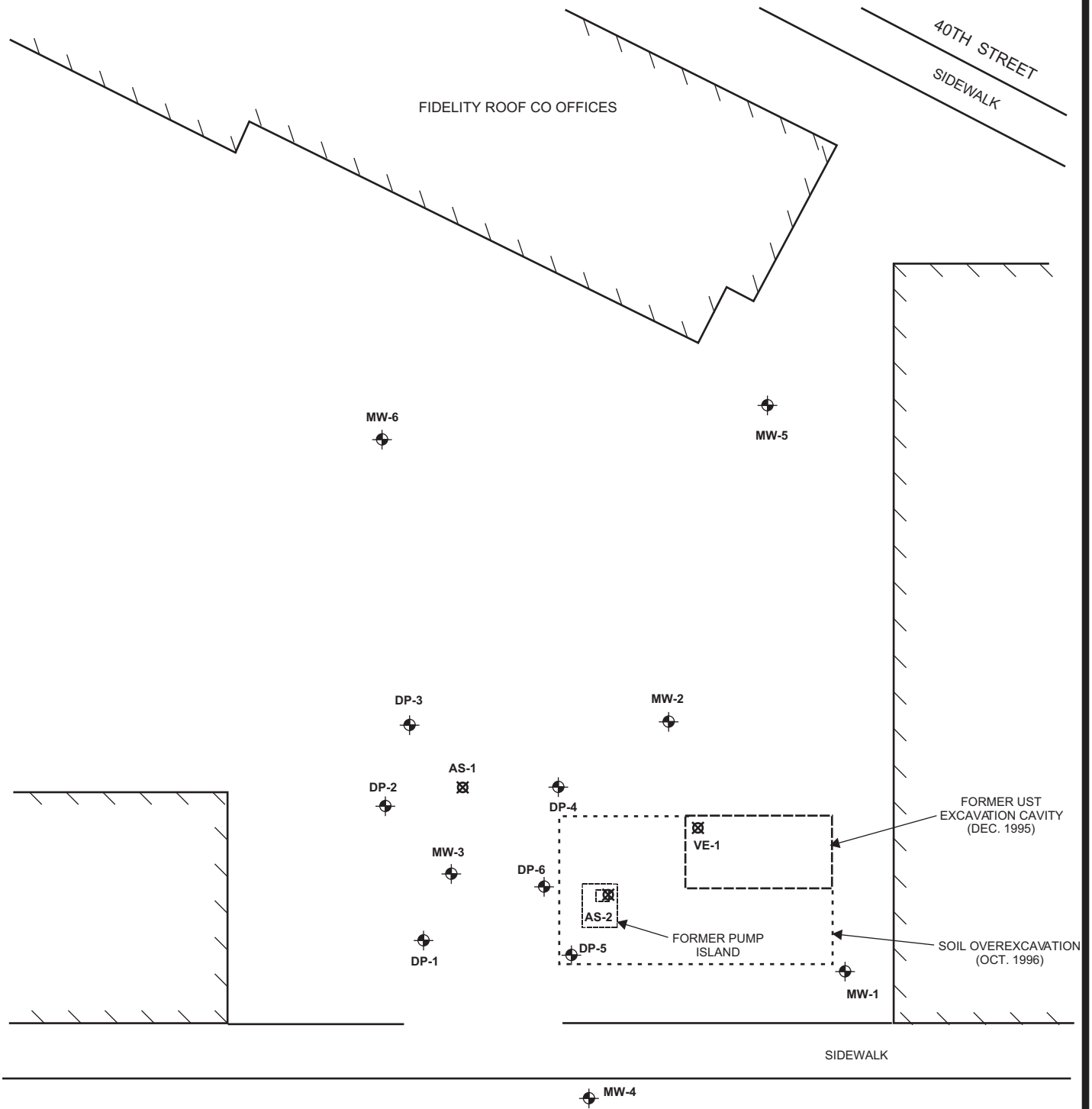
FIGURES



DESIGNED BY:	CHECKED BY:	**SITE VICINITY MAP**	DATE: 04/03/2007	FIGURE: 1
DRAWN BY: JG	SCALE:			
PROJECT NO: 330-01-01		1075 40TH STREET OAKLAND, CALIFORNIA		



DESIGNED BY:	CHECKED BY:	**SITE PLAN**	DATE: 04/03/2007	FIGURE: **2**
DRAWN BY: JG	SCALE:			
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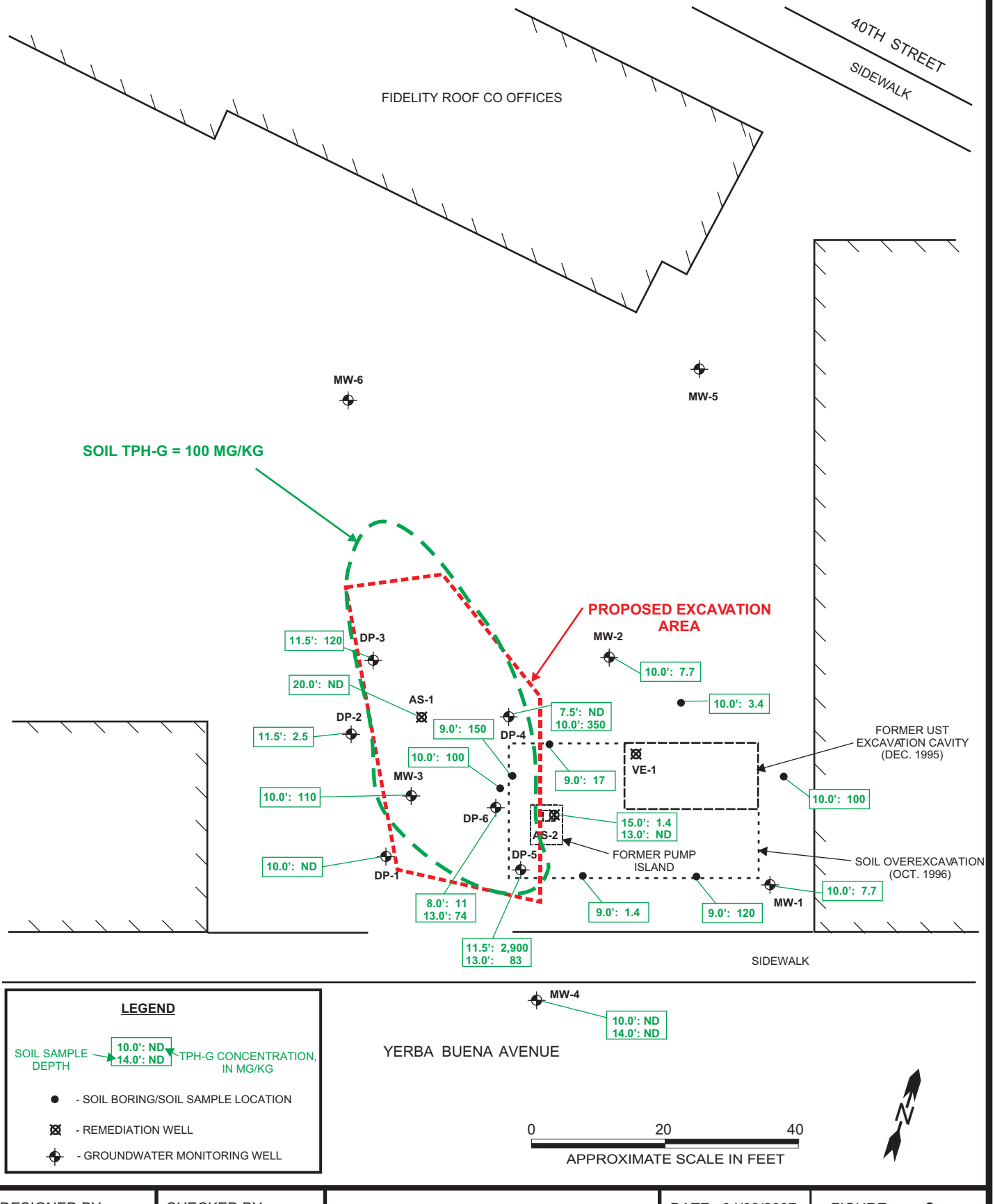
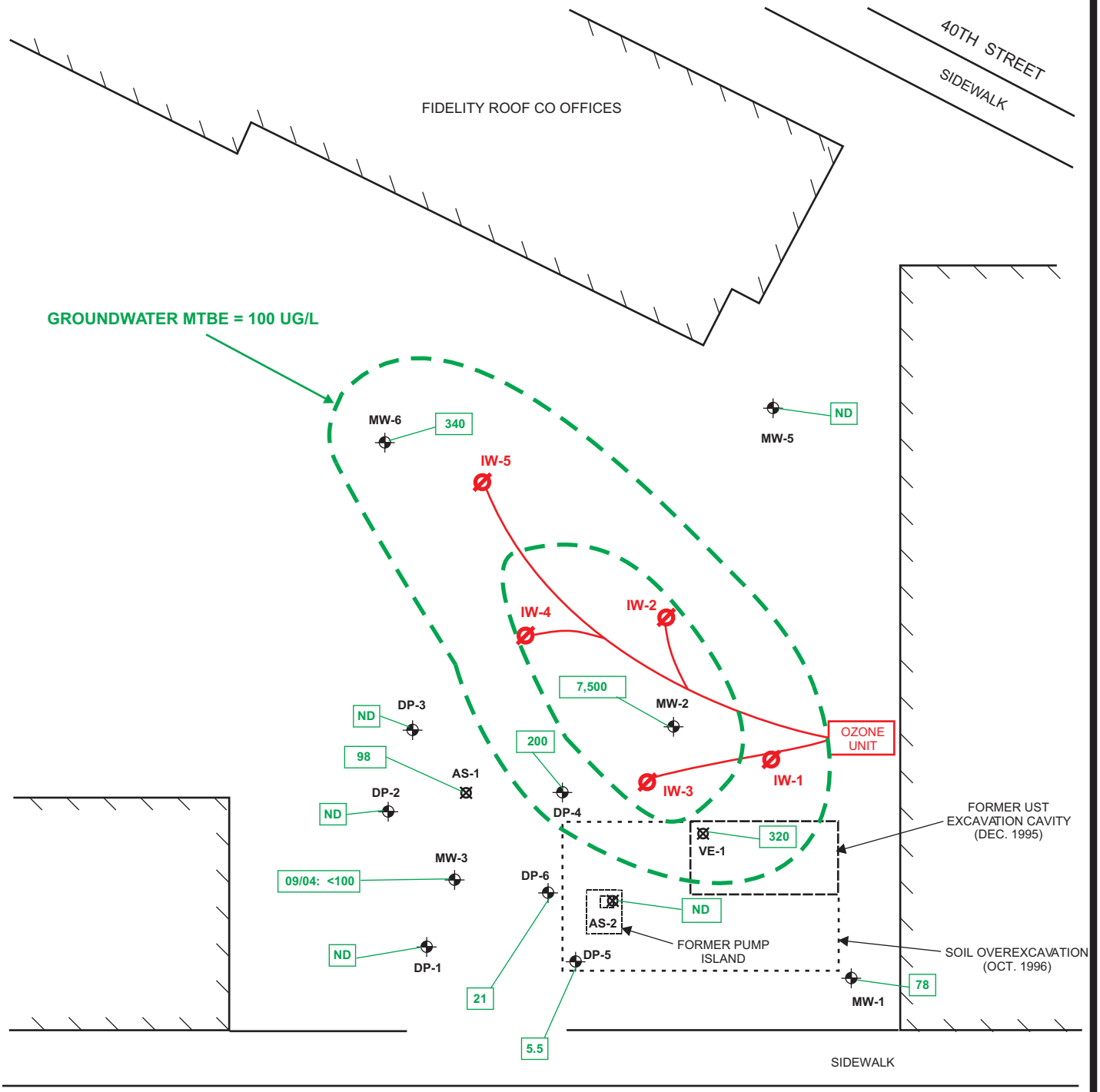


DESIGNED BY:	CHECKED BY:	**SOIL TPH-G RESULTS & PROPOSED EXCAVATION PLAN**	DATE: 04/03/2007	FIGURE: **3**
DRAWN BY: JG	SCALE:			
PROJECT NO: 330-01-01		1075 40TH STREET OAKLAND, CALIFORNIA		



DESIGNED BY:	CHECKED BY:	**GROUNDWATER MTBE RESULTS & PROPOSED OZONE INJECTION PLAN**	DATE: 04/03/2007	FIGURE: 4
DRAWN BY: JG	SCALE:			
PROJECT NO: 330-01-01		1075 40TH STREET OAKLAND, CALIFORNIA		