Ms. Barbara Jakub, P.G.
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Grimit Auto Repair and Service, 1970 Seminary Boulevard, Oakland, California (Fuel Leak Case No. RO0000413)

Dear Ms. Jakub:

Stratus Environmental, Inc. (Stratus) has recently prepared a report entitled *Amendments to Site Conceptual Model, Revised Work Plan Addendum, and Interim Remedial Action Plan* on my behalf. The report was prepared in regards to Alameda County Fuel Leak Case No. RO0000413, for Grimit Auto Repair and Service, 1970 Seminary Boulevard, Oakland, California.

I have reviewed a copy of this report, sent to me by representatives of Stratus, and "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".

If you have any questions, please contact me via electronic mail at peggy.h.garcia@sbcglobal.net, or my daughter Angel LaMarca at angelcpt@gmail.com.

Sincerely,

Peggy Garcia, Trustee

Ms. Peggy Garcia, Trustee, Grimit Family Trust

Cc: Angel LaMarca

STRATUS
ENVIRONMENTAL, INC.

3330 Cameron Park Drive, Ste 550
Cameron Park, California 95682
(530) 676-6004 ~ Fax: (530) 676-6005

November 16, 2010
Project No. 2090-1970-01

Ms. Barbara Jakub, P.G.
Alameda County Environmental Health Department
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(via Geotracker & Alameda County FTP site)

Re: Amendments to Site Conceptual Model, Revised Work Plan Addendum, and Interim Remedial Action Plan, Former Grimit Auto Repair and Service, 1970 Seminary Boulevard, Oakland, California (Fuel Leak Case No. RO0000413)

Dear Ms. Jakub:

On behalf of the Grimit Family Trust, Stratus Environmental, Inc. (Stratus) has prepared this report for the Grimit Auto Repair and Service (the Site) underground storage tank (UST) fuel leak case, located at 1970 Seminary Boulevard, Oakland, California (see Figures 1 through 3). Alameda County Environmental Health Department (ACEHD) currently oversees an environmental case at the subject property relating to the historical release of petroleum hydrocarbons to the subsurface. ACEHD recently prepared a letter, dated October 1, 2010, which requested that the lateral extent of free phase petroleum hydrocarbons (free product) present in one area of the site be further assessed, and that interim remediation of free product be initiated. The ACEHD letter also included technical comments relating to the submittal of a May 2009 Site Conceptual Model (SCM)/Work Plan for Site Assessment (prepared by Hoexter Consulting), and a June 2010 Addendum to this Work Plan (prepared by Stratus), and requested that additional information relating to both the May 2009 and June 2010 documents be submitted for agency review.

Stratus is proposing to utilize a dual phase extraction (DPE) remediation system to complete the interim remedial efforts requested by ACEHD. Based on our understanding of the site geology, the distribution of petroleum hydrocarbons in the subsurface, and the results of previously completed DPE pilot testing, we believe that this technology will be effective in removing petroleum hydrocarbon mass from the subsurface and mitigating free product. This document proposes to install 3 wells surrounding the area where free product has previously been identified. The wells will initially be used to assess the lateral extent of free product to the subsurface. Once the DPE equipment is installed, the proposed new wells will be used for extraction of soil vapors and groundwater from the subsurface. Based on the results of the historical DPE pilot testing, the radius of influence (ROI) around the 3 proposed wells will cover the area with previously identified free product, and

thus should be effective in removing petroleum hydrocarbon mass and reducing free product levels.

The following subsections of this document present data and technical discussions requested by ACEHD in the October 1, 2010 letter. The information provided has been segregated as it relates to either the SCM, or the agency required site assessment work, as appropriate. Following presentation of this data, an Interim Remedial Action Plan (IRAP), which presents details associated with the proposed DPE cleanup project, is provided for ACEHD review.

ADDITIONAL INFORMATION TO SUPPLEMENT SITE CONCEPTUAL MODEL

Free Product and Gasoline Range Organics (GRO) in Well MW-1

As requested by ACEHD, Stratus has prepared graphs that depict historical groundwater elevations at well MW-1, and historical GRO concentrations (see Attachment 1) in the MW-1 samples, since 1990. For comparison, graphs depicting GRO concentrations on both a linear scale, and a logarithmic scale, are provided in Attachment 1. In order to prepare these graphs, Stratus re-calculated groundwater elevations presented prior to 2004, since the groundwater elevations reported prior to this time were computed relative to a different datum (pre-geotracker) than the groundwater elevations reported since 2004. Thus the groundwater elevations shown on the graphs are all relative to the 2004 well survey data. On the linear scale only graph, Stratus also omitted a few of the GRO concentration data points (above 100,000 micrograms per liter [µg/L]), so that the remainder of the data points could be illustrated at a scale that allows for a clearer depiction of concentration trends versus groundwater elevations. The elevation of the top of the MW-1 well screen, which is submerged when groundwater elevations exceed about 22 feet mean sea level (MSL), is also included on the figures for reference.

Between 2007 and 2010, groundwater monitoring and sampling were performed in the months of January/early February and July. In three of the four years (all except 2009), free product thicknesses were significantly higher in July (0.17 to 0.42 feet) than in January (0.02 to 0.12 feet). During 2009, groundwater elevations in January and July were similar (unsubmerged well screen), and free product thicknesses were the same (0.12 feet). Given this observation, free product thickness measured in well appears to be affected by groundwater elevation and whether or not the well screen is submerged.

Groundwater elevations have fluctuated between about 18 and 28 feet MSL (11.8 to 21.5 feet below ground surface [bgs] at MW-1) between 1990 and 2010. Given this observation, it is likely that a relatively thick 'smear zone' of petroleum hydrocarbon contaminants is present beneath the site. In our opinion, remedial efforts should largely focus on remediating the soil and groundwater 'smear zone', as these contaminants likely provide an ongoing source that allows for the accumulation of free product beneath the site.

The 'smear zone' is depicted in cross sectional profile in updated geologic cross sections, which are presented in Attachment 3 and discussed below.

Historical Groundwater Elevation Versus Time Graphs (Wells MW-2 through MW-9)

As directed by ACEHD, Stratus has prepared a figure (see Attachment 2) which illustrates groundwater elevations during the historical site monitoring period. As discussed above, Stratus re-calculated groundwater elevations presented prior to 2004, since the groundwater elevations reported prior to this time were computed relative to a pre-geotracker survey datum; the groundwater elevations shown on the graph are thus all relative to the 2004 well survey data.

Updated Geologic Cross Sections

ACEHD requested that geologic cross sections presented in the May 2009 SCM by Hoexter Consulting be re-drawn at a larger scale. ACEHD also requested that contaminant concentrations and historical groundwater level ranges be included on the updated Figures. Stratus has prepared 3 updated geological cross sections that follow the same cross sectional trace lines (A to A' through C to C') as were presented in the May 2009 report. Attachment 3 includes both the updated cross sections, a site plan illustrating the surface traces of these 3 cross sections, and the historical figures prepared by Hoexter Consulting.

REVISIONS TO SUBSURFACE SITE INVESTIGATION AND DESCRIPTION OF SOIL GAS SAMPLING PROCEDURES

Modification of Soil Boring Locations

In their October 2010 letter, ACEHD suggests that the number of offsite soil borings proposed in May 2009 was insufficient for assessing the distribution of contaminants offsite. Stratus is thus proposing to advance two additional soil borings (one along the northwestern side of Seminary Avenue and one along the northeastern side of Harmon Avenue) to allow for collection of additional soil and groundwater samples. The locations of some of the other boring locations proposed in May 2009 have also been adjusted, and most of the proposed offsite borings are now situated in a transect pattern paralleling the Harmon Avenue and Seminary Avenue right-of-ways (see Figure 3).

Soil Gas Survey and Laboratory Analyses

In the May 2009 document, Hoexter Consulting recommended collecting soil gas samples from depths of about 4 and 8 feet bgs at each proposed sampling location. In the October 1, 2010 letter, ACEHD approved the soil gas sampling locations proposed by Hoexter Consulting, but directed that soil gas samples be collected at a depth deeper than

5 feet bgs. Stratus is thus proposing to collect only one soil gas sample at each of the proposed locations, at a depth of about 6 feet bgs.

In order to complete the soil gas survey, Stratus is proposing to install soil gas implants into the subsurface, using hand tools (hand auger, post hole digger, etc.), and then return to the site a few weeks after installation to collect soil gas samples at each location. Completing sampling a few weeks after installation of the soil gas implants should allow for equilibration of soil gas conditions that will be affected by the digging work used to install the soil gas implants. The soil gas survey will be performed in general accordance with standards established by the Department of Toxic Substances Control (DTSC) and the California Regional Water Quality Control Board (Los Angeles Region, [LARWQCB]).

After advancing the hand-augered soil borings to 6 feet bgs, the drilling contractor will then install a polyethylene soil vapor implant (Environmental Service Products Part No. SVPT-91, or similar) attached to 0.25-inch diameter Teflon tubing, or similar, near the base of the borehole. A filter pack of graded sand will be placed around the soil vapor implant. Granular bentonite will be placed within the annular space of the borehole, up to a depth of about 1.5 feet bgs. The remaining annular space will be backfilled to surface grade with neat cement. A protective manhole cover will then be placed over the top of each soil gas implant.

Stratus will remobilize to the site to collect the soil gas samples. Prior to sampling, the approximate air volume situated inside of the Teflon tubing and the filter pack sand surrounding the soil vapor implant will be calculated. Stratus will then use an expendable Summa Canister to purge this ambient air. Following purging of the ambient air, a separate Summa Canister will be used to collect each soil gas sample. During filling of the canisters, the flowrate will be regulated to fill at a rate between 100 and 200 milliliters per minute (ml/min). A tracer gas leak check (using 1,1-difluoroethane [1,1-DFA]) will be used to assess potential leakage within the sampling train. Leak detection will be evaluated by periodically spraying the outside of the sample train assembly with 1,1-DFA during filling of the Summa Canisters. A schematic diagram of the soil gas sampling system is provided as Attachment 4.

Air samples will be forwarded to a California state-certified laboratory for chemical analysis under strict chain-of-custody procedures. The soil gas samples will be analyzed for GRO, benzene, toluene, ethylbenzene, total xylenes, (BTEX), methyl tertiary butyl ether (MTBE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), di-isopropyl ether (DIPE), tertiary butyl alcohol (TBA), 1,2-dibromoethane (EDB), 1,2-dichloroethane (1,2-DCA), naphthalene, the EPA Standard List Volatile Organic Compounds (VOCs), and for the leak detection tracer gas (1,1-DFA) using USEPA Method TO-15. In addition, the samples will be analyzed for oxygen, carbon dioxide, and methane using American Society for Testing and Materials (ASTM) Method D1946.

Irrigation Well Sampling

Stratus will attempt to locate the irrigation well that is reportedly situated at 1955 Seminary Avenue. The sampling method will be determined once the well has been inspected. Our intention is to purge the well casing, to the extent practical, and collect a sample from freshly recharged groundwater. The samples will be retained in laboratory supplied, properly preserved glass vials (VOAs), labeled, identified on a chain-of-custody form, and placed in an ice-chilled cooler for temporary storage. Proper chain-of-custody procedures will be followed until the sample is delivered to a state-certified laboratory for chemical analysis. The sample will be analyzed for GRO using USEPA Method 8015, and for BTEX, MTBE, TBA, TAME, DIPE, ETBE, 1,2-DCA, EDB, and VOCs using USEPA Method 8260.

Surveying of Wells and Soil Borings

Based on information provided in the May 2009 SCM, the elevations of the wells at the site have been surveyed to the NAVD 29 standard. While the surveyor who performed this work (Virgil Chavez Land Surveying of Vallejo) reportedly completed this work in compliance with Geotracker standards, ACEHD has requested that following the upcoming phase of investigation, surveying work be performed to the NAVD 88 standard. Stratus will thus retain a surveyor to survey borings and wells to the NAVD 88 standard.

INTERIM REMEDIAL ACTION PLAN

Project Approach

Monitoring well MW-1, which appears to be situated near a former fuel dispenser island area of the site, and generally west (downgradient) of the former UST areas, is typically impacted with free product. The distribution of petroleum hydrocarbon contaminants at the time of the July 2010 sampling event is depicted on Figure 4. In 1997, Terra Vac Corporation performed a remediation pilot test that evaluated the feasibility of using DPE technology to mitigate site contaminants. During the test, well MW-1 was utilized for simultaneous extraction of groundwater and soil vapors from the subsurface. Terra Vac concluded, based on the findings of their pilot testing work, that DPE was a viable remedial alternative for the site.

Although the precise limit of free product distribution has not been established, historical groundwater monitoring at wells MW-7, MW-9, and MW-4, which are located approximately 16, 22, and 32 feet from well MW-1, have never contained free product (see Figure 4 for spatial distribution of the wells). Given this observation, mitigation of free product, and additional study of the distribution of free product in the subsurface, should focus on the area near well MW-1. Stratus is proposing to install three 4-inch diameter wells (RW-1 through RW-3) in areas surrounding well MW-1 where no

monitoring wells have been completed. Periodic monitoring will then be conducted at wells RW-1 through RW-3, to evaluate the area surrounding well MW-1 for the presence of free product during seasonal fluctuations in groundwater levels at the site. Monitoring for free product will continue until utility service for the DPE system can be obtained, and the necessary equipment can be mobilized to the site and installed.

Given the findings of the 1997 DPE pilot study, what appears to be a relatively thick 'smear zone' of contaminants resulting from seasonal fluctuations in groundwater levels, and our understanding of the subsurface geological conditions at the site, DPE appears to be an appropriate remedial technology for removing petroleum hydrocarbon mass and free product near the former UST/fuel dispenser area and MW-1. Data collected during the interim site cleanup work will also be useful in deciding whether or not DPE would be the best remedial approach for mitigating a larger area of the subsurface, once the site assessment scope of work has been implemented and the lateral and vertical extent of contaminants has been more fully assessed. Pending approval of DPE as the interim remedial technology for the site, and the location of proposed wells RW-1 through RW-3, Stratus will implement the proposed work activities as described in the following subsections of this report.

Scope of Work (IRAP)

The objectives of the proposed work covered under this IRAP are to:

- Further investigate the lateral extent of free product around the well MW-1 area.
- Implement interim remediation near the area where free product has been identified in order to remove petroleum hydrocarbon mass from the subsurface and reduce/eliminate the presence of free product.
- Further assess soil types and the distribution of contaminants in soil.

To accomplish these objectives, Stratus is proposing the following activities:

- Drill and install three (3) 4-inch diameter wells (RW-1 through RW-3) to a depth of approximately 28 feet bgs.
- Collect soil samples in 5-foot intervals during the advancement of each boring for lithologic comparison and chemical analysis.
- Conduct intermittent gauging of free product levels in wells RW-1 through RW-3, and well MW-1, until DPE remedial efforts can be initiated.
- If free product is not identified in wells RW-1 through RW-3, these wells will be developed.

- Survey the elevations and locations of wells RW-1 through RW-3, at the time of surveying work for the other soil borings and soil gas sampling wells.

The proposed scope of work has been subdivided into tasks 1 through 5. Details are provided for the activities associated with each task. All geologic work will be conducted under the direct supervision of a State of California Professional Geologist or Engineer and will be conducted in accordance with standards established by the *Tri-Regional Board Recommendations for Investigation and Evaluation of Underground Tank Sites* (April 2004) and ACEHD guidelines. A California-licensed C-57 well driller will perform all drilling and well construction activities.

Task 1: Pre-field Activities for Drilling Event

Following approval of this scope of work by the ACEHD, the following activities will be completed:

- Obtain a well installation permit from Alameda County Public Works Department (ACPWD),
- Retain and schedule a licensed C-57 drilling contactor,
- Update the health and safety plan for the site,
- Mark boring locations and contact Underground Service Alert to locate underground utilities in the vicinity of the work areas, and
- Notify ACEHD, ACPWD, and the property tenant of the scheduled field activities.

Task 2: Field Activities for Drilling Event

Task 2A: Soil Borings and Well Installation

A Stratus geologist, under the direct supervision of a California Registered Professional Geologist, will oversee a C-57 licensed drilling contractor complete the soil boring and well construction activities necessary to install three 4-inch diameter extraction wells at the site. Each well boring will be advanced using a limited access drilling rig equipped with 10-inch diameter hollow stem augers. The initial 5 feet of each boring will be cleared using hand tools to reduce the possibility of damaging underground utilities.

Soil samples will be collected at 5-foot intervals during the advancement of the well borings using a California-type, split-spoon sampler equipped with three cleaned brass or stainless steel sleeves. The ends of the bottom-most, intact brass/stainless steel sleeve from each sample interval will be lined with Teflon™ sheets, capped, and sealed. Each sample will be labeled, placed in a resealable plastic bag, and stored in an ice-chilled cooler. The samples will remain chilled until relinquished to a state-certified analytical

laboratory. Chain-of-custody procedures will be followed from the time the samples are collected until the time the samples are relinquished to the laboratory. A minimum of two soil samples will be submitted for chemical analyses from each boring. Additional samples may be selected for chemical analyses based on field conditions.

Soil in the remaining sleeves will be classified onsite using the Unified Soil Classification System and recorded, along with other pertinent geologic information, on a boring log. Soil from each sampled interval will also be placed and sealed in plastic bags to allow the accumulation of VOC vapors within the airspace in the bags. A photo-ionization detector (PID) will be used to measure VOC concentrations from each sample, which will be recorded on the boring logs. PID results will also be used to evaluate which soil samples should be sent to the laboratory for chemical analyses.

Wells RW-1 through RW-3 will be completed through the 10-inch diameter hollow stem augers used to advance the borings. The wells will be constructed using 4-inch diameter PVC casing and 20 feet of 0.020-inch machine slotted PVC well casing installed from approximately 8 to 28 feet bgs. A sand filter pack (#3 or similar) will be placed in the annular space around the well casing from the bottom of the well screen to approximately two feet above the top of the well screen. Following initial placement of the filter pack, the well will be surged to settle the filter pack within the borehole and additional sand will be added, if necessary. Approximately three feet of bentonite will be placed on top of the filter pack and hydrated with clean water to provide a sanitary seal for the well. Neat cement will be used to backfill the remaining annular space around the well casing. A watertight locking cap will be placed over the top of the well casing, and a traffic rated vault box will be installed around the top of the well. The actual well construction may be modified in the field based on conditions encountered at the time of the investigation.

Task 2B: Free Product Gauging and Well Development

A minimum of 48 hours following the installation of wells RW-1 through RW-3, Stratus will return to the site to develop these wells. Prior to completing development work, Stratus personnel will utilize an interface probe to gauge for the presence of free product. If no free product is measured, development will be conducted by surging and bailing, followed by groundwater pumping. Development will continue until approximately ten casing volumes are removed and water appears free of suspended sediment, or until the wells go dry. If measurable thicknesses of free product are observed, well development will be postponed.

Task 2C: Waste Management

All drill cuttings and wastewater generated during the field activities will be contained in U.S. Department of Transportation-approved 55-gallon steel drums. The drums will be

appropriately labeled and stored at the site pending proper disposal. A licensed contractor will transport the soil and wastewater to an appropriate facility for disposal.

Task 2D: Surveying

A licensed surveyor will be retained to survey the elevations and locations of wells MW-1 through MW-9, RW-1 through RW-3, and the newly completed soil gas sampling wells and soil borings. Elevations will be surveyed to the NAVD 88 datum and in compliance with Geotracker standards.

Task 2E: Chemical Analysis of Soil Samples

A California State Certified analytical laboratory will analyze soil samples collected from well boring RW-1 for GRO using USEPA Method 8015, and for BTEX, MTBE, TBA, TAME, DIPE, ETBE, 1,2-DCA, EDB, and VOCs using USEPA Method 8260.

Task 3: Site Investigation Report

Stratus will prepare a report documenting the findings of the subsurface investigation and well installation work. At a minimum, the report will include a scaled site plan, soil boring logs, well details, tabulated data tables presenting soil, groundwater, and soil gas analytical data, certified analytical results, surveying data, and confirmation of Geotracker data uploads. The report will be submitted within about 6 weeks of receiving all analytical results.

Task 4: Implementation of Interim Remedial Action using DPE

Stratus intends to use a trailer mounted 400 cubic feet per minute (cfm) DPE system, or similar, to complete interim remedial efforts. The 400 cfm thermal oxidizer with a 20 to 25-horsepower (hp) liquid-ring pump will be used to apply vacuum and extract soil vapors and groundwater from wells RW-1 through RW-3. The trailer-mounted system also houses a 100-gallon water/condensate knockout tank and a 2-hp liquid discharge pump to drain the knockout tank. Stratus intends to power the DPE system using electrical and natural gas service provided from the local utility provider to the City of Oakland (Pacific Gas & Electric Company [PG&E]). Given the space limitations of the property, and cost considerations, Stratus does not intend to operate the DPE system on a short-term basis using a generator for electrical service, and propane to maintain combustion temperatures, while waiting for PG&E service connections. Prior to the commencement of DPE, Stratus will obtain an air discharge permit from the Bay Area Air Quality Management District (BAAQMD) and a sewer discharge permit from the East Bay Municipal Utility District (EBMUD). Locking temporary chain-link fencing will be erected around all remediation equipment utilized at the site.

The liquid ring pump will be used to extract groundwater and soil vapors from the extraction wells, and the extracted groundwater and soil vapor (dual phase flow) will be directed to the knockout tank through subgrade piping. The soil vapors, separated from the groundwater in the knockout tank, will be directed to the thermal oxidizer for abatement before discharging to the atmosphere. Groundwater extracted from the subsurface, and separated from the air stream using the knockout tank, will be routed through granular activated carbon filtering vessels for treatment. Groundwater will then be discharged to the sanitary sewer under permit conditions.

The location for the remediation system, and subsurface trenches for connection to wells RW-1 through RW-3, will be determined at a later date, once the routes for connection of utility services have been established and an agreement with the property tenant has been obtained. Upon completion of system installation, source testing will be performed, as required by the BAAQMD. Upon successful completion of source testing, the remediation system will be started up for continuous operation. At a minimum, Stratus will visit the site twice per month in order to perform maintenance work, collect measurements pertaining to operation of the equipment, and collect soil and groundwater samples needed to verify compliance with the BAAQMD and EBMUD permits and to assess the effectiveness of contaminant mass removal from the subsurface.

Samples of the influent and effluent soil vapor and groundwater will be collected on a monthly basis, at a minimum, and forwarded to a state-certified analytical laboratory for chemical analysis. The samples will be analyzed for GRO using EPA Method 8015, and for BTEX and MTBE using EPA Method 8260.

Task 5: Remediation Status Reports

Stratus will prepare quarterly status reports to document performance of the DPE system. During the first and third quarter of each calendar year, results of groundwater monitoring and sampling work will be included in these reports. The reports will include, at a minimum, the following items:

- Tabulated field data such as flow rates, dissolved oxygen, groundwater measurements, and induced vacuums,
- Tabulated concentrations of petroleum hydrocarbons in extracted soil vapors and groundwater,
- Operational uptime information,
- Certified analytical reports, and
- Estimated mass extraction rates for select contaminants.

SCHEDULE

Site Assessment Work and Well Installations

Since the locations of the soil gas sampling points on the two neighboring land parcels (5900 Holway and 5909 Harmon) have already been finalized, the soil boring location at 5909 Harmon has already been approved, and sampling of the irrigation well at 1955 Seminary Avenue has been directed, Stratus has already forwarded access agreements to each of these three property owners for review and approval. Stratus will also forward an encroachment permit application to the City of Oakland for review. It is expected that a few months may be required in order to obtain these items from the City of Oakland and nearby property owners. Once the access agreements and City permit have been obtained, Stratus will retain a C-57 licensed drilling contractor, apply for ACPWA drilling permits, and schedule the work for prompt implementation.

Once all of the field activities have been completed, a report will be prepared to document all work and present findings of the investigation. The report will be submitted within approximately 4 weeks of receiving all laboratory analytical results.

Installation of DPE System

Upon approval of this report by ACEHD, Stratus will immediately apply for electrical and natural gas service from PG&E. Stratus anticipates that approximately 6 to 9 months will be necessary until these utilities can be installed at the site. We anticipate that while waiting for the utility service connections, permits from EBMUD, BAAQMD, and the City of Oakland can be obtained. Once the permits and utility service connections are in place, the DPE system will be mobilized to the site and construction of the remediation system will commence.

LIMITATIONS

This report was prepared in general accordance with accepted standards of care that existed at the time this work was performed. No other warranty, expressed or implied, is made. Conclusions and recommendations are based on field observations and data obtained from this work and previous investigations. It should be recognized that definition and evaluation of geologic conditions is a difficult and somewhat inexact science. Judgments leading to conclusions and recommendations are generally made with an incomplete knowledge of the subsurface conditions present. More extensive studies may be performed to reduce uncertainties. This report is solely for the use and information of our client unless otherwise noted.

November 16, 2010

Please contact Scott Bittinger at (530) 676-2062, or via electronic mail at sbittinger@stratusinc.net, if you have any questions regarding this document or the project in general.

Sincerely,

STRATUS ENVIRONMENTAL, INC.

REGISTERED GEOLOGIST
Scott G. Bittinger
No. 7477
STATE OF CALIFORNIA

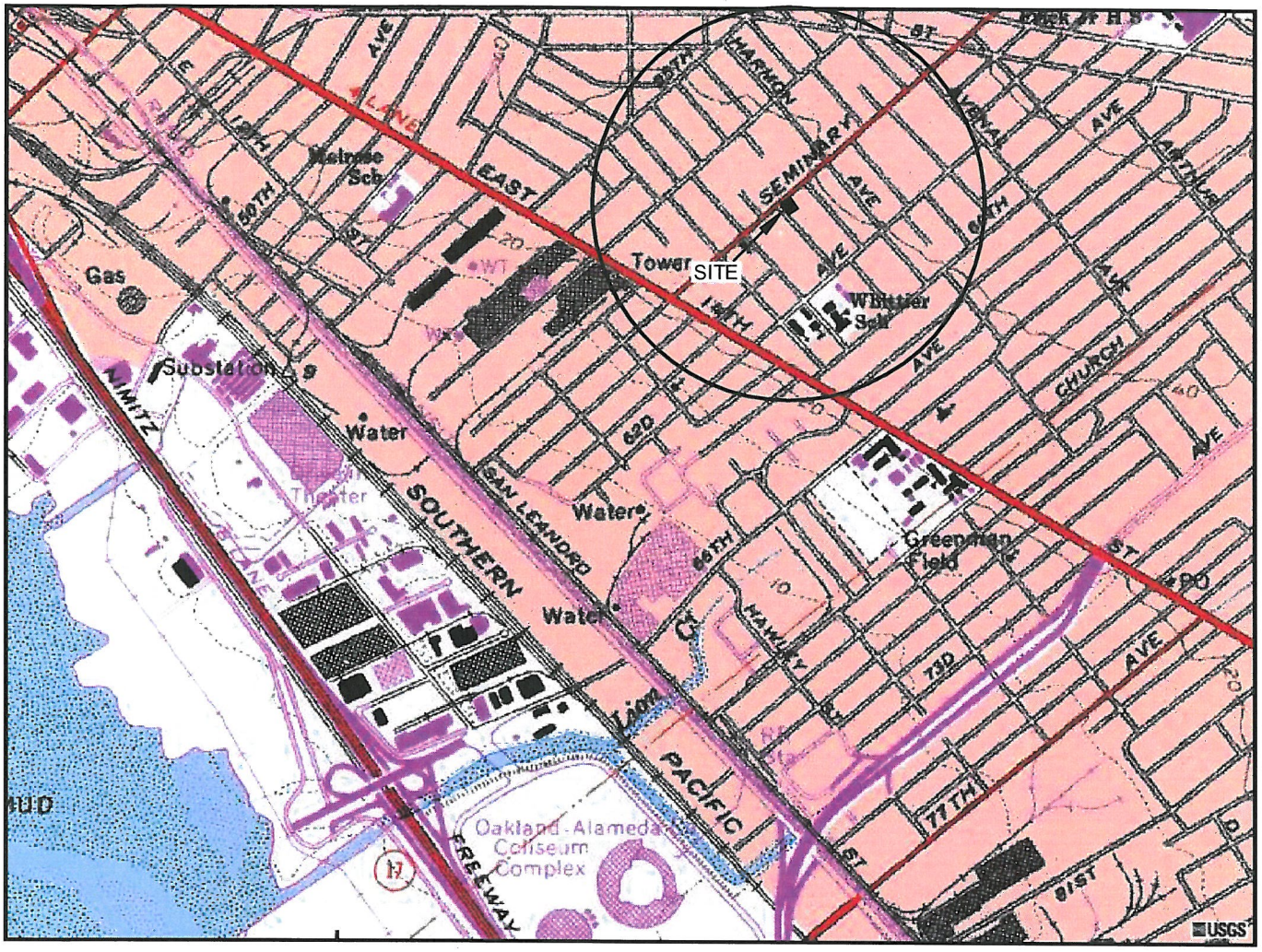
Scott G. Bittinger, P.G.
Project Manager

Gowri S. Kowtha, P.E.
Principal Engineer

Attachments:

Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Site Vicinity Map
Figure 4	Petroleum Hydrocarbon Groundwater Analytical Summary, Third Quarter 2010
Attachment 1	Graphs of Groundwater Elevations and GRO Concentrations at Well MW-1, 1990 to 2010
Attachment 2	Historical Groundwater Elevation Data, Wells MW-2 through MW-9
Attachment 3	Geologic Cross Sections (Updated and Historical)
Attachment 4	Schematic Diagram of Soil Gas Sampling System

cc: Ms. Angel LaMarca and Ms. Peggy Garcia, Trustee, Grimit Family Trust



GENERAL NOTES:
BASE MAP FROM U.S.G.S.
OAKLAND, CA.
7.5 MINUTE TOPOGRAPHIC
PHOTOREVISED 1996

N

QUADRANGLE LOCATION

0 1800 FT

APPROXIMATE SCALE

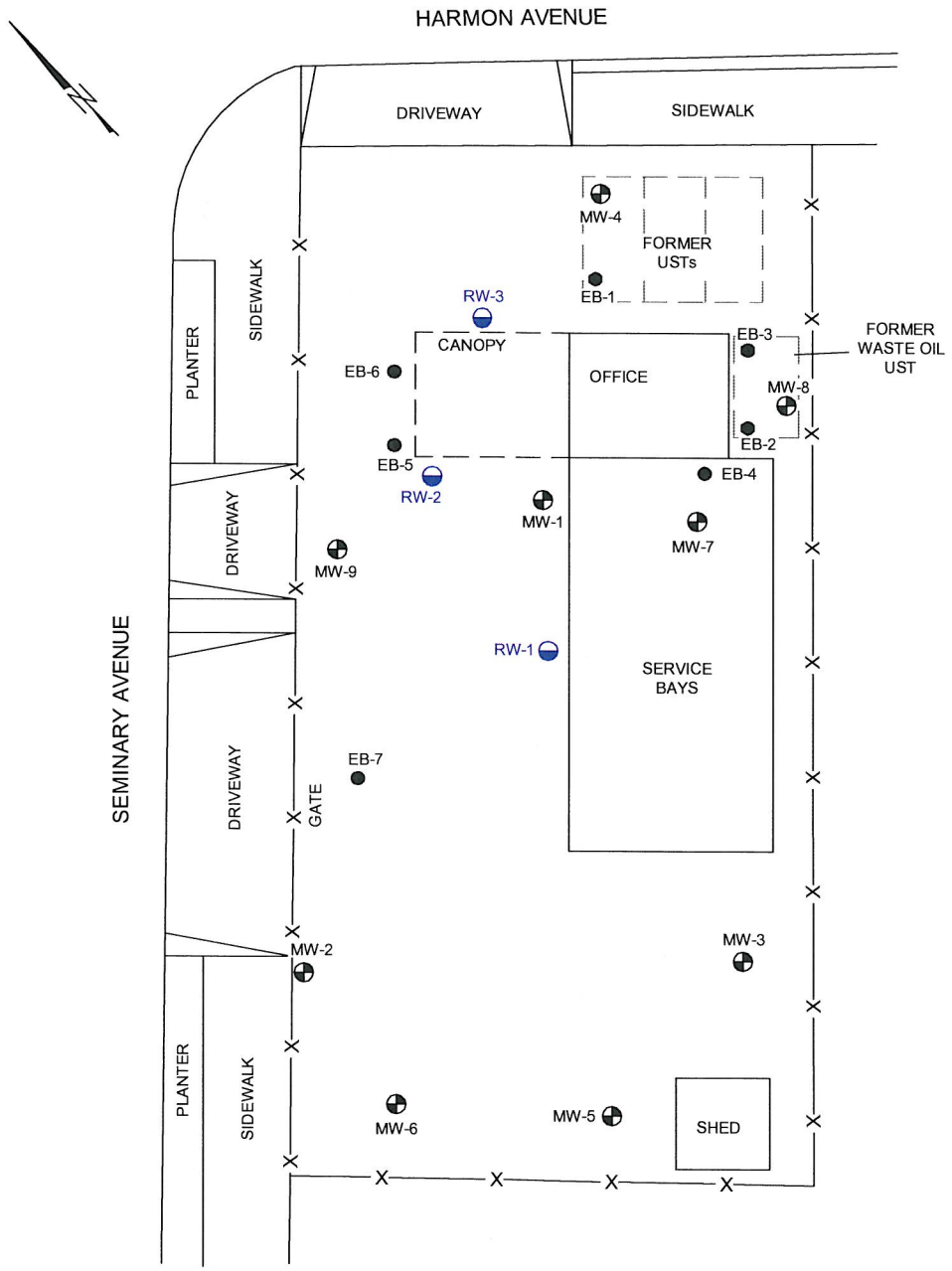
STRATUS
ENVIRONMENTAL, INC.

FORMER GRIMIT AUTO
1970 SEMINARY AVENUE
OAKLAND, CALIFORNIA

SITE LOCATION MAP

FIGURE
1

PROJECT NO.
2090-1970-01



LEGEND

- MW-1 GROUNDWATER MONITORING WELL LOCATION
- EB-1 EXPLORATORY BORING LOCATION
- RW-1 PROPOSED FREE PRODUCT OBSERVATION/ REMEDIATION WELL LOCATION

0 20 FT

APPROXIMATE SCALE

NOTE: LOCATIONS OF ALL WELLS & SITE FEATURES ARE APPROXIMATE

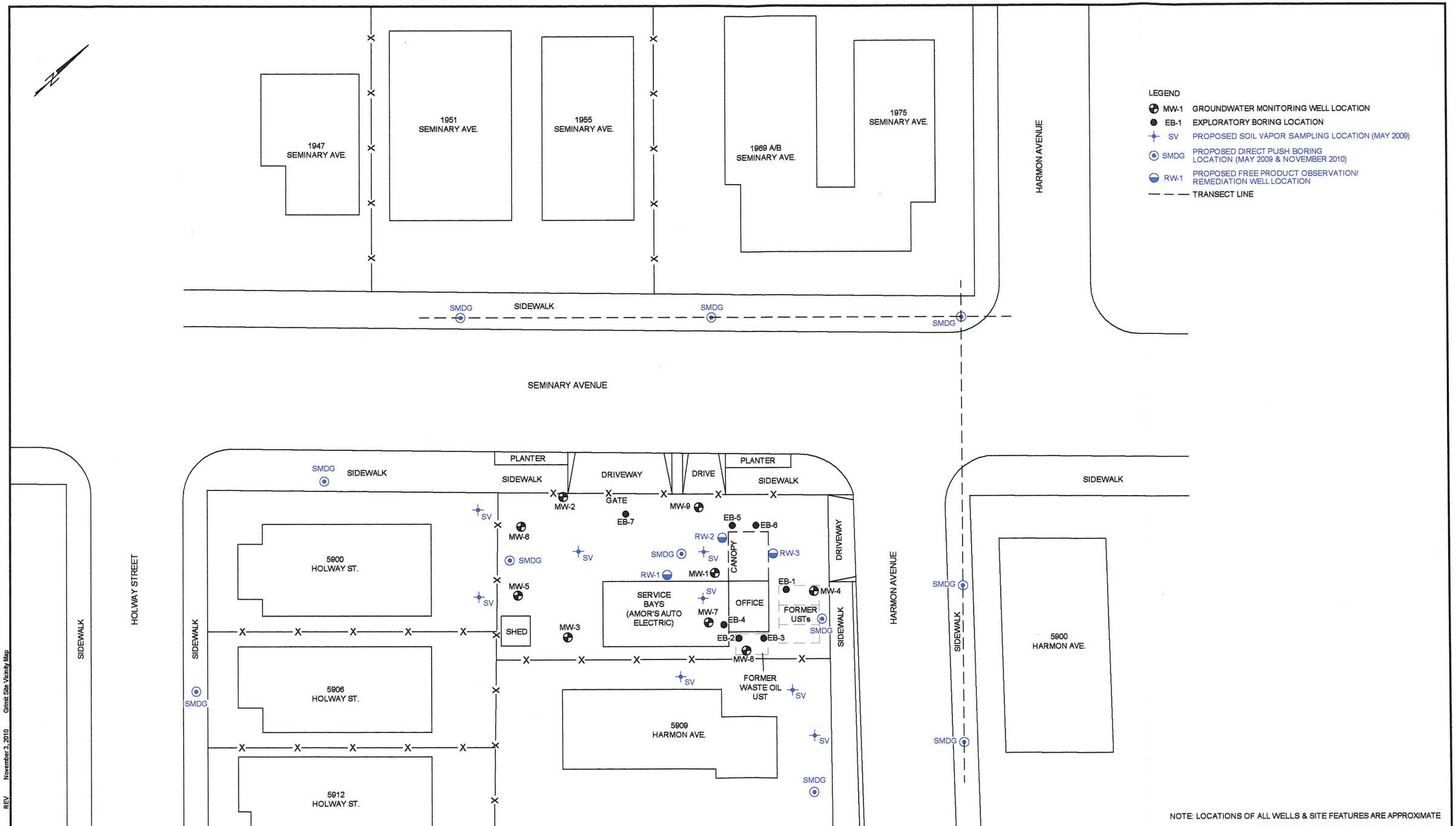
STRATUS ENVIRONMENTAL, INC.

FORMER GRIMIT AUTO
1970 SEMINARY AVENUE
OAKLAND, CALIFORNIA

SITE PLAN

FIGURE 2

PROJECT NO. 2090-1970-1



NOTE: LOCATIONS OF ALL WELLS & SITE FEATURES ARE APPROXIMATE

REV November 3, 2010 Grimit Site Vicinity Map

Grimit AutoAssessment JMP

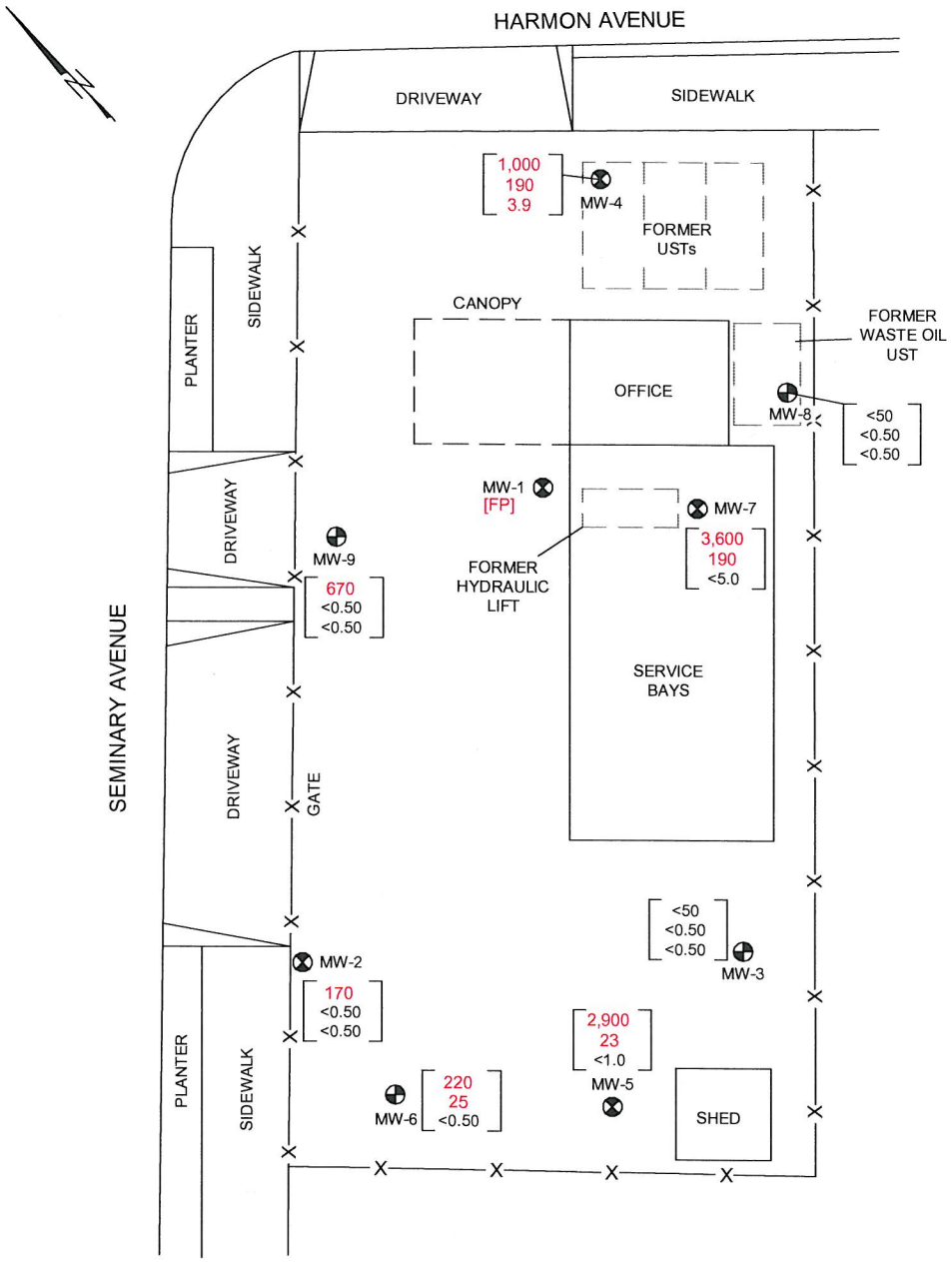
STRATUS ENVIRONMENTAL, INC.

FORMER GRIMIT AUTO
1970 SEMINARY AVENUE
OAKLAND, CALIFORNIA

SITE VICINITY MAP

FIGURE
3

PROJECT NO.
2090-1970-1



LEGEND

MW-3 SHALLOW SCREENED MONITORING WELL LOCATION

MW-1 DEEP SCREENED MONITORING WELL LOCATION

[<50 / <0.50 / <0.50] GASOLINE RANGE ORGANICS (GRO) IN µg/L; BENZENE CONCENTRATION IN µg/L; METHYL TERTIARY BUTYL ETHER (MTBE) IN µg/L

SAMPLES COLLECTED ON 7/29/10

GRO ANALYZED BY EPA METHOD 8015B

BENZENE & MTBE ANALYZED BY EPA METHOD 8260B

[FP] = FREE PRODUCT

NOTE: LOCATIONS OF ALL WELLS & SITE FEATURES ARE APPROXIMATE

0 20 FT

APPROXIMATE SCALE

STRATUS ENVIRONMENTAL, INC.

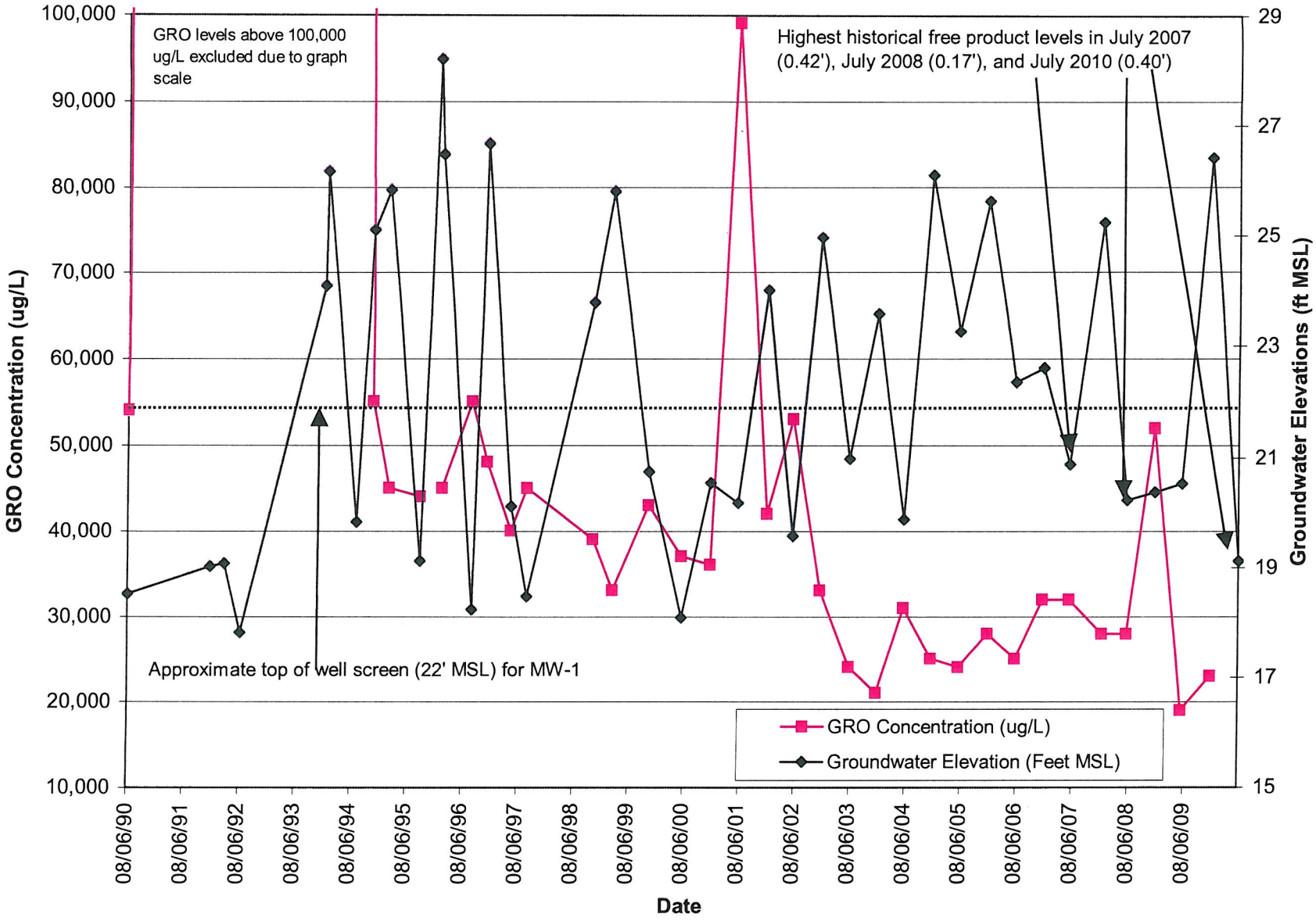
FORMER GRIMIT AUTO
1970 SEMINARY AVENUE
OAKLAND, CALIFORNIA
PETROLEUM HYDROCARBON
GROUNDWATER ANALYTICAL SUMMARY
3rd QUARTER 2010

FIGURE
4
PROJECT NO.
2090-1970-01

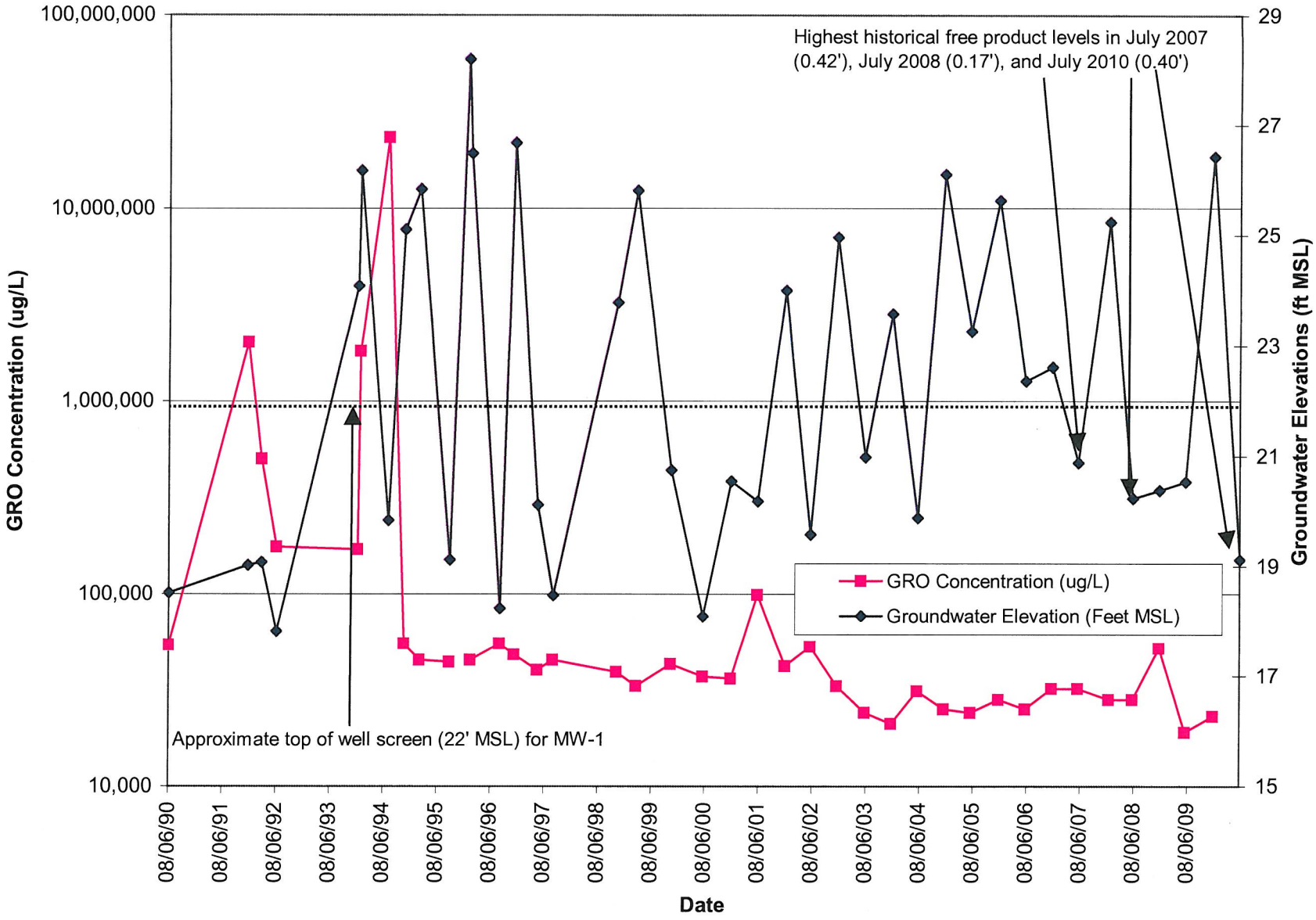
Grimit Auto\Quarterly JMP REV September 20 2010 Grimit Quarterly Figures

ATTACHMENT 1

Groundwater Elevations and GRO Concentrations at Well MW-1, 1990 to 2010

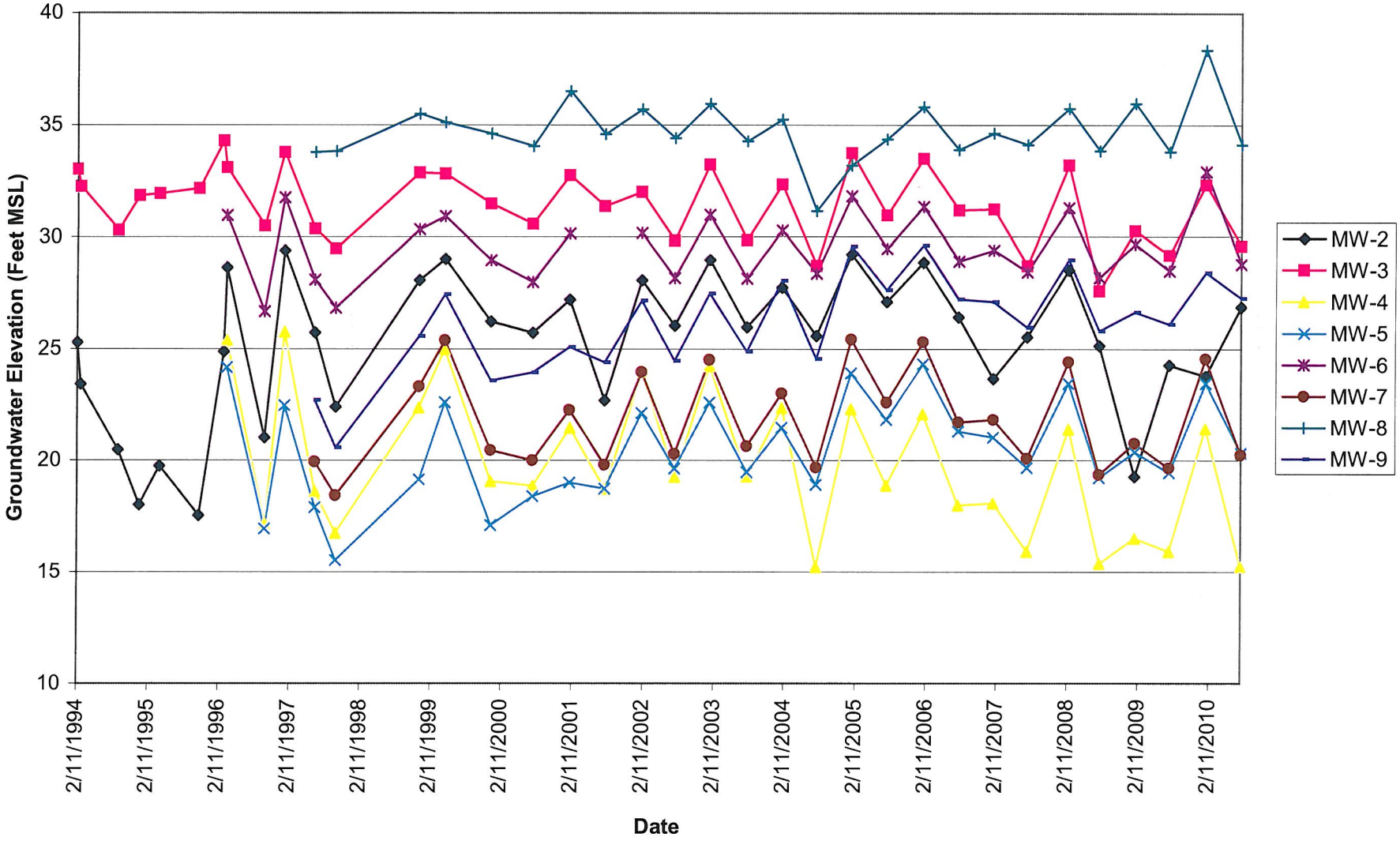


Groundwater Elevations and GRO Concentrations at Well MW-1, 1990 to 2010

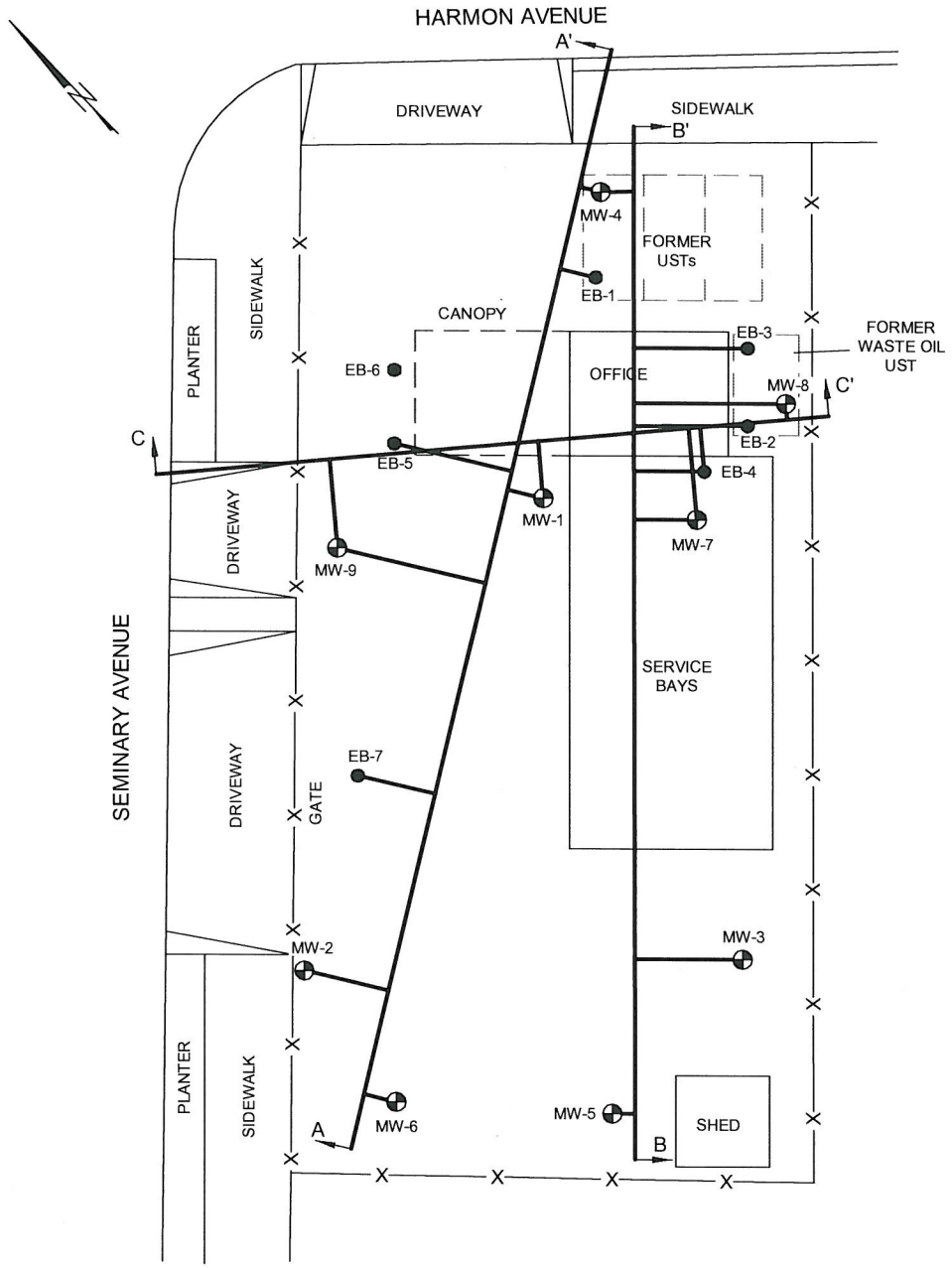


ATTACHMENT 2

Historical Groundwater Elevation Data, Wells MW-2 through MW-9



ATTACHMENT 3



LEGEND

- MW-1 GROUNDWATER MONITORING WELL LOCATION
- EB-1 EXPLORATORY BORING LOCATION
- A A' CROSS SECTION TRACE

0 20 FT

APPROXIMATE SCALE

NOTE: LOCATIONS OF ALL WELLS & SITE FEATURES ARE APPROXIMATE

STRATUS ENVIRONMENTAL, INC.

FORMER GRIMIT AUTO
1970 SEMINARY AVENUE
OAKLAND, CALIFORNIA

SITE PLAN

FIGURE
2

PROJECT NO.
2090-1970-1

A
SOUTHWEST

A'
NORTHEAST

CROSS SECTION C-C'

MW-6 MW-2 EB-7 MW-9 MW-1 EB-5 EB-1 MW-4

FORMER UST PIT

[ND/ND]
[130/ND]
[120/ND]
[910/0.76]
[ND/ND]
[ND/ND]
[10/0.037]
[ND/0.022]
[4/NA]
[13/0.038]
[FP]
[4.5/0.015]
[0.5/NA]
[50/NA]
[130/0.38]
[ND/ND]
[68/0.21]
[5.4/ND]

220
25
7/29/10

170
<0.50
7/29/10

670
<0.50
7/29/10

1,000
190
7/29/10

TD=21'
TD=23.5'
TD=20'
TD=22'
TD=25'
TD=36.5'
TD=36.5'
TD=36.5'

APPROXIMATE AREA OF CONTAMINANT "SMEAR ZONE"

VERTICAL DEPTH IN FEET BELOW SURFACE GRADE

0
10
20
30
40
50

LEGEND:

APPROXIMATE CONTACT BETWEEN SOIL TYPES

SOIL SAMPLE LOCATION

[130/ND] TOTAL PETROLEUM HYDROCARBONS AS GASOLINE, BENZENE CONCENTRATION IN MILLIGRAMS PER KILOGRAM (mg/Kg)
ND = NON-DETECT
NA = NOT ANALYZED

HISTORICAL DEPTH TO GROUNDWATER RANGE (1990 - 2010), (MW-1 DATA)

SCREENED INTERVAL OF WELL

TD=36.5' TOTAL DEPTH OF BORING IN FEET BELOW SURFACE GRADE

SILT/CLAY MIXTURES

SAND, SILTY SAND, GRAVEL

CLAYEY SAND, CLAYEY GRAVEL

GRAVEL FILL

[170 / <0.50 / 7/29/10] GASOLINE RANGE ORGANICS (GRO) IN MICROGRAMS PER LITER µg/L; BENZENE CONCENTRATION IN µg/L; DATE WELL SAMPLED

[FP] FREE PRODUCT IN WELL

VERT. SCALE 0 – 10 FT

HORZ. SCALE 0 – 10 FT

NOTE: CROSS SECTION DEVELOPED USING SOIL BORING LOGS PREPARED BY PREVIOUS CONSULTANTS

Grimit AutoAssessment JMP REV November 4, 2010 Grimit Cross Sections

STRATUS
ENVIRONMENTAL, INC.

FORMER GRIMIT AUTO
1970 SEMINARY AVENUE
OAKLAND, CALIFORNIA

GEOLOGIC CROSS SECTION A-A'

FIGURE
A

PROJECT NO.
2090-1970-1

B
SOUTH-SOUTHWEST

B'
NORTH-NORTHEAST

CROSS SECTION C-C'

MW-5 MW-3 MW-7 EB-4 EB-2 MW-8 EB-3 MW-4

FORMER WASTE OIL UST

FORMER UST PIT

APPROXIMATE AREA OF CONTAMINANT "SMEAR ZONE"

VERTICAL DEPTH IN FEET BELOW SURFACE GRADE

0
10
20
30
40
50

[9.7/ND]
[ND/0.020]
[300/ND]
[ND/ND]
[71/0.095]
[63/ND]
[13/0.038]
[ND/ND]
[1.2/0.047]
TD=21.5'
TD=16.5'
TD=16.5'
TD=20'
TD=22'
2,900
23
7/29/10
<50
<0.50
7/29/10
<50
<0.50
7/29/10
3,600
190
7/29/10
TD=32'
[68/0.21]
1,000
190
7/29/10
[5.4/ND]
TD=36.5'
TD=36.5'

LEGEND:

APPROXIMATE CONTACT BETWEEN SOIL TYPES

SOIL SAMPLE LOCATION

[9.7/ND] TOTAL PETROLEUM HYDROCARBONS AS GASOLINE, BENZENE CONCENTRATION IN MILLIGRAMS PER KILOGRAM (mg/Kg)
ND = NON-DETECT

HISTORICAL DEPTH TO GROUNDWATER RANGE (1990 - 2010), (MW-3 DATA)

SCREENED INTERVAL OF WELL

TD=36.5' TOTAL DEPTH OF BORING IN FEET BELOW SURFACE GRADE

SILT/CLAY MIXTURES

SAND, SILTY SAND, GRAVEL

CLAYEY SAND, CLAYEY GRAVEL

GRAVEL FILL

[<50 / <0.50 / 7/29/10] GASOLINE RANGE ORGANICS (GRO) IN MICROGRAMS PER LITER µg/L; BENZENE CONCENTRATION IN µg/L; DATE WELL SAMPLED

VERT. SCALE 0 – 10 FT

HORZ. SCALE 0 – 10 FT

NOTE: CROSS SECTION DEVELOPED USING SOIL BORING LOGS PREPARED BY PREVIOUS CONSULTANTS

Grimit AutoAssessment JMP REV November 4, 2010 Grimit Cross Sections

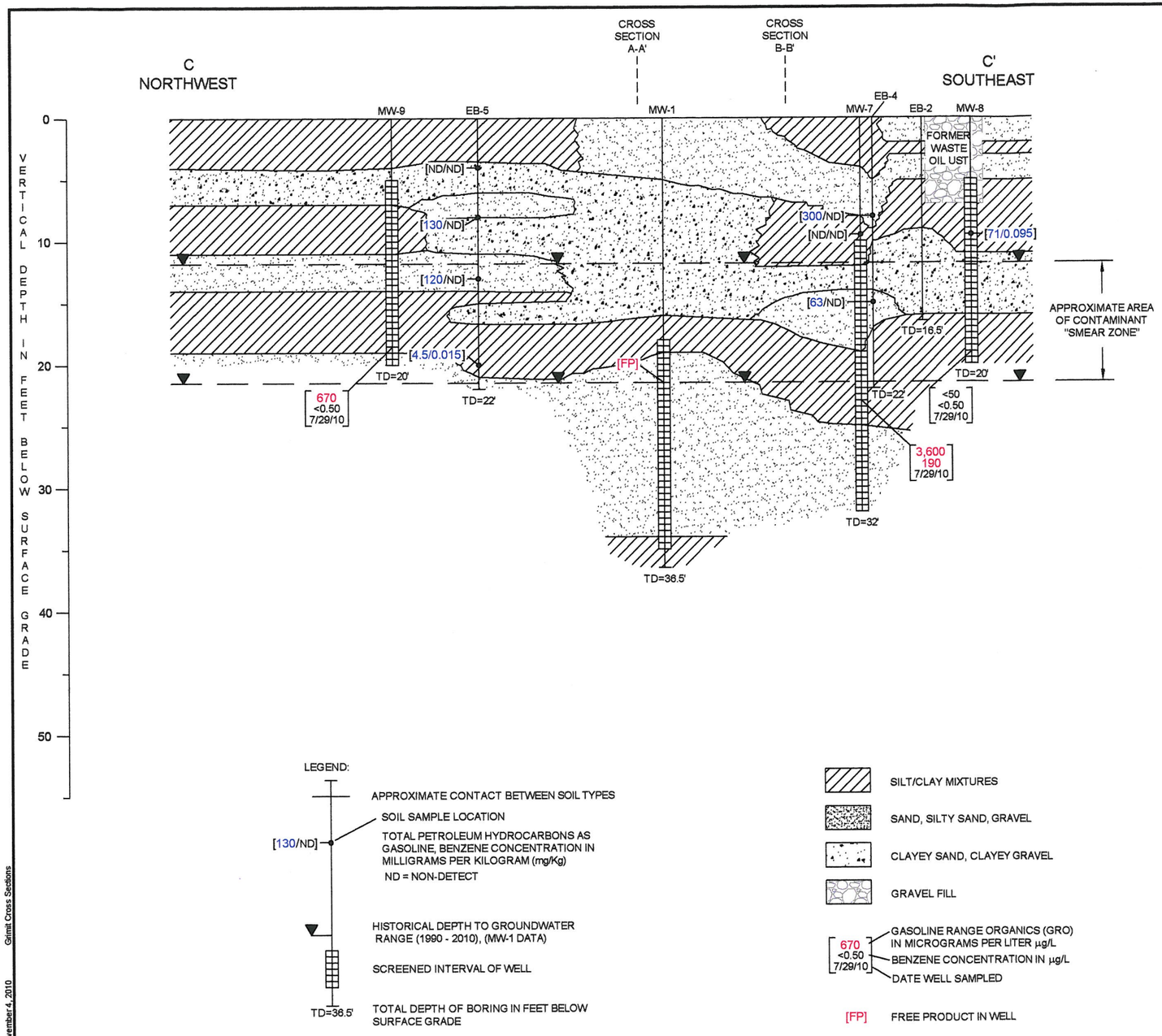
STRATUS ENVIRONMENTAL, INC.

FORMER GRIMIT AUTO
1970 SEMINARY AVENUE
OAKLAND, CALIFORNIA

GEOLOGIC CROSS SECTION B-B'

FIGURE
B

PROJECT NO.
2090-1970-1



LEGEND:

- APPROXIMATE CONTACT BETWEEN SOIL TYPES
- SOIL SAMPLE LOCATION
- [130/ND] — TOTAL PETROLEUM HYDROCARBONS AS GASOLINE, BENZENE CONCENTRATION IN MILLIGRAMS PER KILOGRAM (mg/Kg); ND = NON-DETECT
- HISTORICAL DEPTH TO GROUNDWATER RANGE (1990 - 2010), (MW-1 DATA)
- SCREENED INTERVAL OF WELL
- TD=36.5' — TOTAL DEPTH OF BORING IN FEET BELOW SURFACE GRADE

- SILT/CLAY MIXTURES
- SAND, SILTY SAND, GRAVEL
- CLAYEY SAND, CLAYEY GRAVEL
- GRAVEL FILL

[670 / <0.50 / 7/29/10] — GASOLINE RANGE ORGANICS (GRO) IN MICROGRAMS PER LITER µg/L; BENZENE CONCENTRATION IN µg/L; DATE WELL SAMPLED

[FP] FREE PRODUCT IN WELL

VERT. SCALE 0 – 10 FT

HORZ. SCALE 0 – 10 FT

NOTE: CROSS SECTION DEVELOPED USING SOIL BORING LOGS PREPARED BY PREVIOUS CONSULTANTS

Grimit AutoAssessment JMP REV November 4, 2010 Grimit Cross Sections

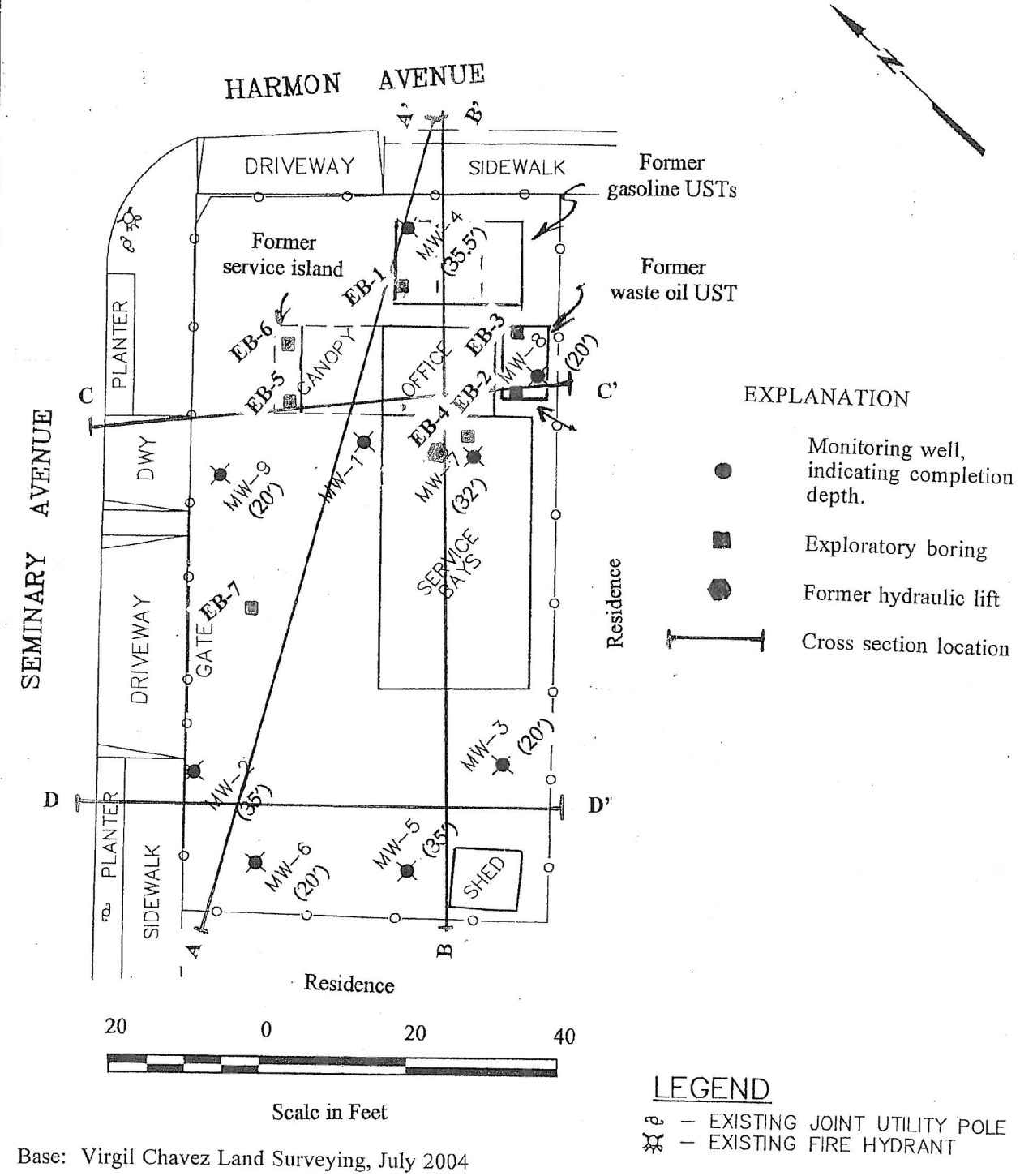
STRATUS ENVIRONMENTAL, INC.

FORMER GRIMIT AUTO
1970 SEMINARY AVENUE
OAKLAND, CALIFORNIA

GEOLOGIC CROSS SECTION C-C'

FIGURE
C

PROJECT NO.
2090-1970-1



Base: Virgil Chavez Land Surveying, July 2004

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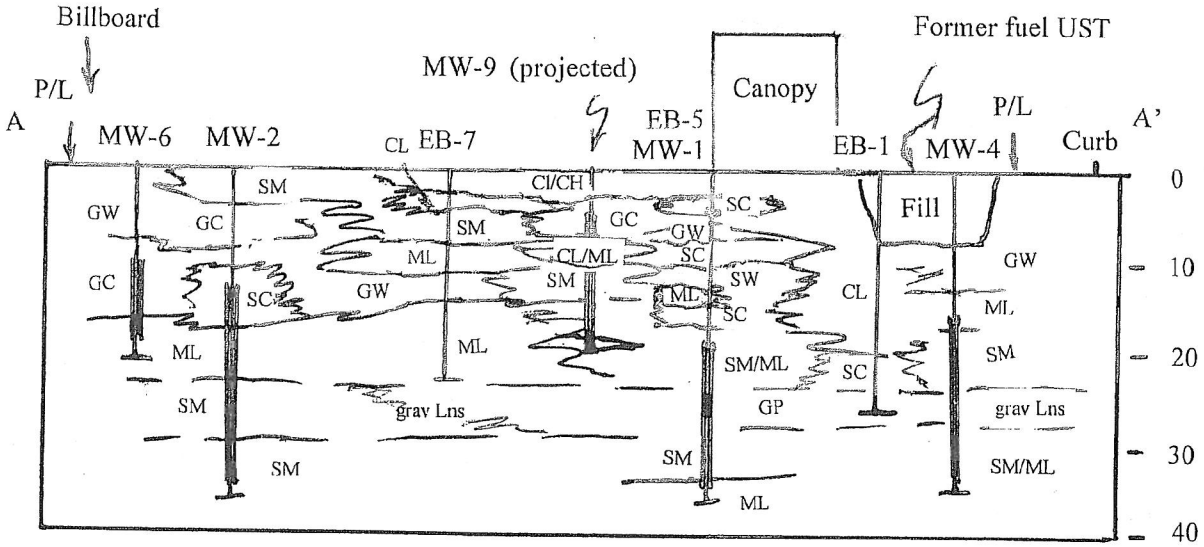
Engineering Geology
Environmental Studies

SITE PLAN

1970 Seminary Ave.
Oakland, California

Project No.	Date	Figure 4
E-10-1G-772G	May 2009	



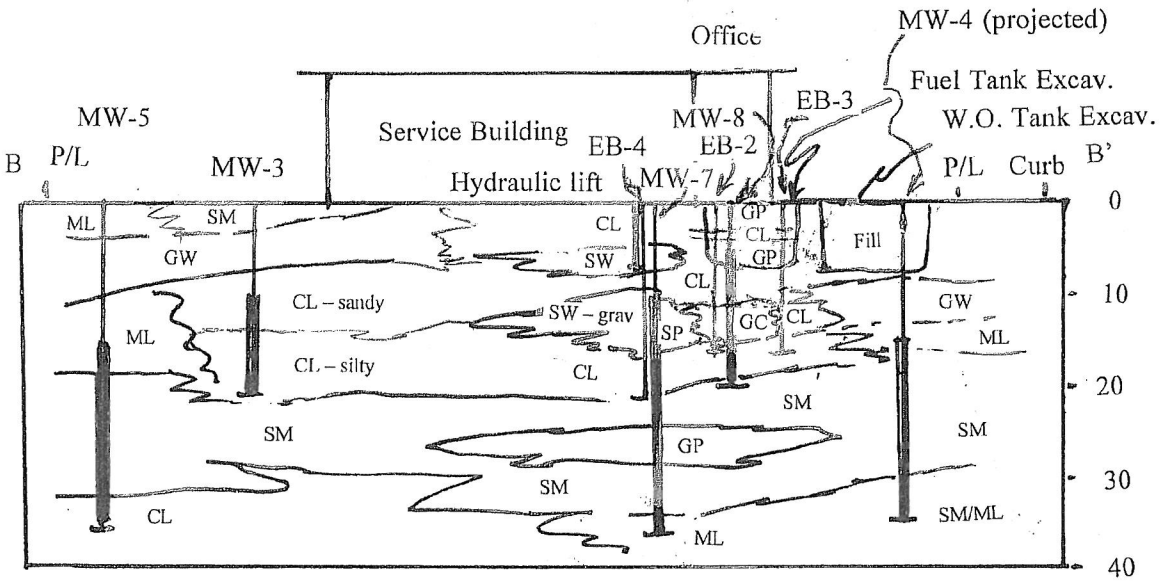
EXPLANATION

GC – clayey gravel
GM – silty gravel
GP – poorly graded gravel
GW – well graded gravel
SC – clayey sand
SM – silty sand
SP – poorly graded sand
SW – well graded sand
ML/MH – lean/plastic silt
CL/CH – lean/plastic clay
Grav lense – gravelly lenses within clay, silt, sand

Boring (EB) or monitoring well (MW) indicating screened interval

Scale in feet (vertical = horizontal)
See Figure 4 for location of section

HOEXTER CONSULTING Geology Engineering Geology Environmental Studies	CROSS SECTION A-A' 1970 Seminary Ave. Oakland, California	
	Project No. E-10-1G-772G	Date May 2009
		Figure 8A



EXPLANATION

GC – clayey gravel
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Grav lns – gravelly lenses within clay, silt, sand

Boring (EB) or monitoring well (MW) indicating screened interval

Scale in feet (vertical = horizontal)
See Figure 4 for location of section

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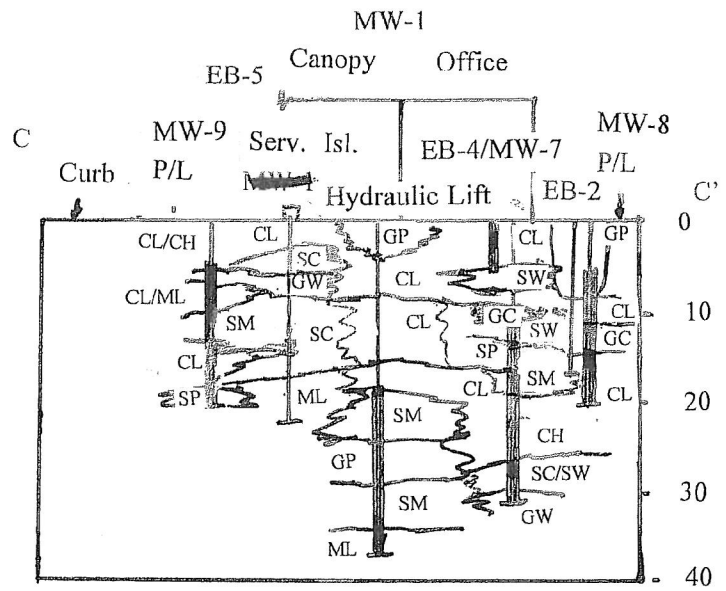
CROSS SECTION B-B'

1970 Seminary Ave.
Oakland, California

Project No.	Date	Figure
E-10-1G-772G	May 2009	8B



EXPLANATION

GC – clayey gravel
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GW – well graded gravel

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SW – well graded sand

ML/MH – lean/plastic silt
CL/CH – lean/plastic clay

Grav lns – gravelly lenses within clay, silt, sand

Boring (EB) or monitoring well (MW) indicating screened interval

Scale in feet (vertical = horizontal)
See Figure 4 for location of section

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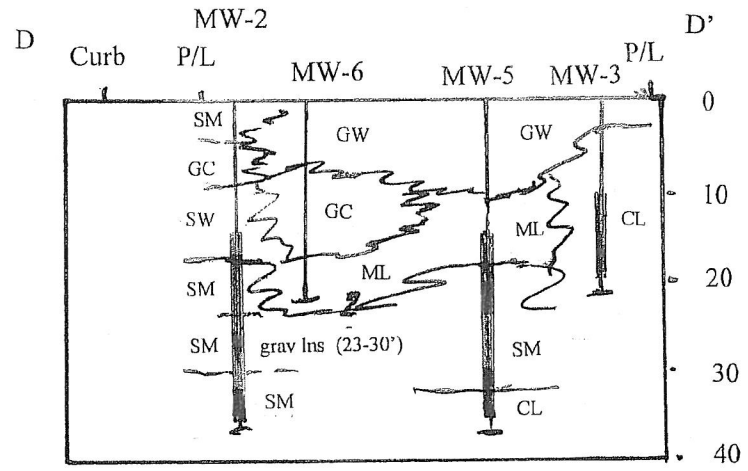
CROSS SECTION C-C'

1970 Seminary Ave.
Oakland, California

Project No.	Date	Figure 8C
E-10-1G-772G	May 2009	



EXPLANATION

GC – clayey gravel
GM – silty gravel
GP – poorly graded gravel
GW – well graded gravel

SC – clayey sand
SM – silty sand
SP – poorly graded sand
SW – well graded sand

ML/MH – lean/plastic silt
CL/CH – lean/plastic clay

Grav lns – gravelly lenses within clay, silt, sand

Boring (EB) or monitoring well (MW) indicating screened interval

Scale in feet (vertical = horizontal)
See Figure 4 for location of section

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CROSS SECTION D-D'

1970 Seminary Ave.
Oakland, California

Project No.	Date	Figure 8D
E-10-1G-772G	May 2009	

ATTACHMENT 4

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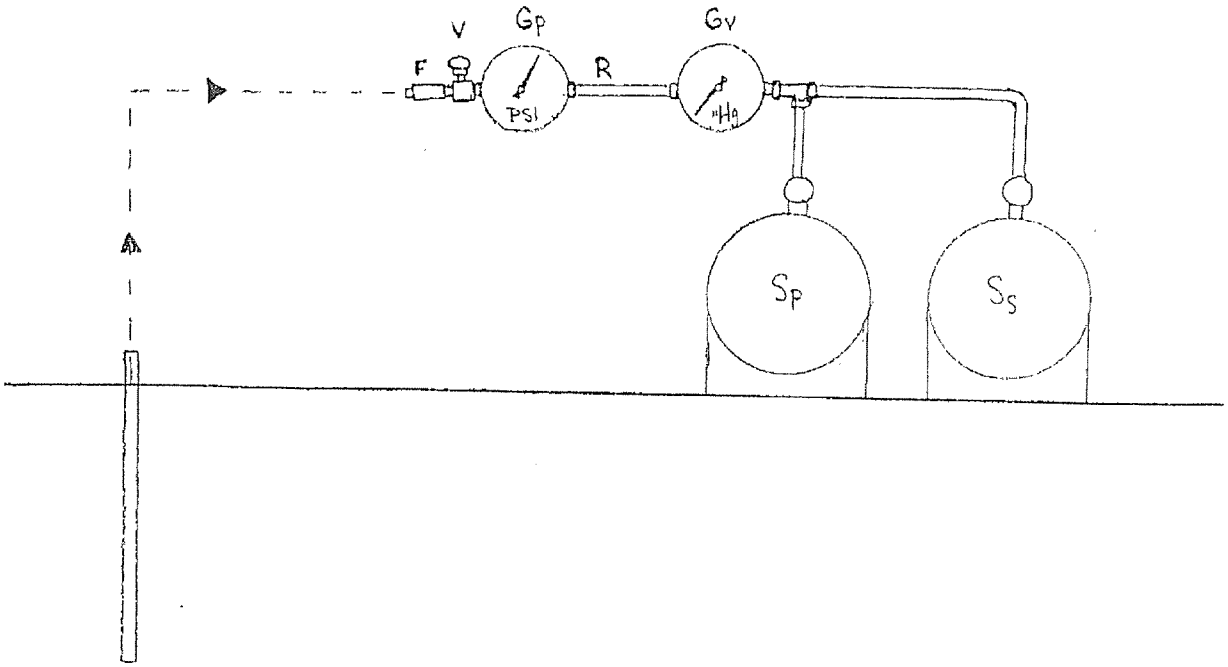
AN ENVIRONMENTAL ANALYTICAL LABORATORY

Schematic of Soil Gas Sampling Manifold

F = Filter
V = Valve
Gp = Pressure Gauge
R = Flow Regulator
G_V = Vacuum Gauge
S_P = Purge Summa Canister
S_S = Sample Summa Canister



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