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FINAL

REMEDIAL ACTION PLAN FOR

RED MOUNTAIN RETAIL GROUP

SW Corner of Hamilton Street and Harbor Boulevard
Costa Mesa, California

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14OT.08560.01.0004

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1.0 SITE DESCRIPTION

The property is located in the vicinity of the southwest corner of Harbor Boulevard and Hamilton Street in Costa Mesa, California; a former medical building is located at 2095 Harbor Boulevard, Randy's Automotive is at 2089 Harbor Boulevard, and Charlie Smiley Roofing is located at 2099 Harbor Boulevard (Figures 1 and 2). Currently, the site consists of numerous parcels of land developed with the former medical building at the northeast corner of the property, Randy's Automotive immediately south of the medical building, and Charlie Smiley Roofing located in the western portion of the site. The medical building is a one and two story structure. Randy's Automotive consists of a garage with two below grade hydraulic lifts along Harbor Boulevard, an office located further west, and six below grade hydraulic lifts and one above grade hydraulic lift located between and south of the garage and office building. Charlie Smiley Roofing occupying the western portion of the property consists of a trailer and add-on structure, and storage areas. Heavy equipment and materials are stored throughout the western portion of the site.

2.0 SITE BACKGROUND

The site background information discussed in this section is entirely based on the review of documents in the December 30, 2005 Clayton Group Services, Inc. *Phase I Environmental Site Assessment* report, as provided to SECOR by Clark Environmental Consulting (CEC). This Phase I ESA document included copies of S&S Commercial Environmental Services reports ([S&S], May 2000; September 2000; October 2001;S&S, March 2002; S&S, June 2002; and S&S, October 2002).

On January 22 and February 2, 2000, S&S performed a limited site assessment with the drilling of 12 hydraulic push soil borings (DP1 through DP12) and the collection of seven hydropunch groundwater samples from soil borings DP1 and DP7 through DP12. S&S reported that gasoline was detected at concentrations of 8.2 parts per million [ppm (DP2)], 8.7 ppm (DP6) and 211 ppm (DP1) at approximately 20 feet below ground surface (bgs), benzene was reported at concentrations ranging from 0.010 to 0.885 ppm, and methyl tertiary butyl ether (MTBE) was reported in a single soil sample at 0.017 ppm (DP12). Groundwater samples were reported to contain gasoline at concentrations ranging from 0.35 to 358 ppm, benzene ranging from 0.0004 to 5.46 ppm, and MTBE ranging from 0.001 to 1.75 ppm (S&S, February 2000).

On April 28, 2000, S&S performed an additional limited site assessment with the drilling of five hydraulic push soil borings (DP13 through DP17) and the collection of five hydropunch groundwater samples from soil borings DP13 through DP17. S&S reported that gasoline was detected at concentrations of 1.2 ppm (DP14), 440 ppm (DP13) and 668 (DP16), benzene was report at concentrations of 0.66 ppm (DP13) and 0.892 ppm (DP16), and MTBE was not reported above the laboratory method detection limits (LMDL). Groundwater samples were reported to contain gasoline at concentrations ranging from 0.475 to 190 ppm, benzene was reported at 0.69 ppm (DP13) and 12.5 ppm (DP17), and MTBE was reported at 0.26 ppm (DP14) and 0.62 ppm (DP16) (S&S, May 2000).

On August 23, 2000, S&S performed a site assessment with the drilling of seven hydraulic push soil borings (1 through 7) and collection of seven hydropunch groundwater samples from soil borings 1 through 7, and the drilling and installation of three groundwater monitoring wells (MW-1 through MW-3). Stabilized groundwater was reported by S&S at depths ranging between 19.18 and 21.58 feet bgs, with a calculated flow towards the northeast at 0.01 feet/foot. S&S reported that soil samples were collected from borings 1 through 5, with no detection of gasoline in any soil sample. Benzene was reported at a concentration of 68 ppm (5-20') and MTBE was reported at concentrations of 0.038 ppm (5-25') and 0.023 ppm (5-30'). Groundwater samples from soil borings 1 through 7 were reported to not contain gasoline or benzene above the LMDL. MTBE was reported at concentrations ranging from 2.1 to 7.1 ppm. S&S reported that on September 5, 2000, light non-aqueous phase liquids (LNAPL) were measured in well MW-2 at a thickness of 1.77 feet. Groundwater samples collected from wells MW-1 and MW-3 were reported to contain gasoline at 1,630 and 1,880 parts per billion (ppb), respectively. Benzene was not reported above the LMDL, and MTBE was only detected in well MW-1 at 1,630 ppb (S&S, September 2000).

On April 8, 2003, S&S performed a site assessment with the drilling and installation of two groundwater monitoring wells (MW-8 and MW-9). Soil samples for chemical analysis were collected from the boring for well MW-9 at 20 and 25 feet bgs. Gasoline, BTEX and MTBE were not detected above the LMDL. Diesel was reported at 73 ppm in sample MW-9-20. S&S also reported that LNAPL was measured in wells MW-2, MW-4, MW-5 and MW-6 at thicknesses of 1.64 feet, 1,20 feet, 0.77 feet and 1.47 feet, respectively. Additionally, groundwater samples collected from site wells contained gasoline concentrations ranging between 101 and 84,600 ppb, diesel concentrations ranging between 784 and 778,000 ppm, benzene concentrations ranging between 323 and 15,900 ppb, and MTBE concentrations ranging between 13.3 and 4,690 ppb. The highest hydrocarbon concentrations were detected in wells containing LNAPL. Well MW-1 contained the highest MTBE concentrations (S&S, May 2003).

Between February 28 and March 2, SECOR performed an assessment of the Randy's Automotive facility located in the eastern portion of the property along Harbor Boulevard. During the assessment program, 12 direct push soil borings were drilled with subsequent hydropunch groundwater samples collected in each soil boring. Additionally, groundwater sampling was performed at the nine site groundwater monitoring wells (MW-1 through MW-9). Results of the assessment program report that limited concentrations of hydrocarbons were noted in soil above 20 feet bgs; the majority of hydrocarbon impact was reported in the 20 and 25-foot depth soil samples. Hydrocarbons were reported in all hydropunch groundwater samples collected from the soil borings; the highest concentrations were detected in the areas of LNAPL. Results of the groundwater monitoring well sampling reported LNAPL measured in wells MW-2, MW-4, MW-5 and MW-6 and dissolved phase hydrocarbons detected in wells MW-1, MW-3, MW-7, MW-8 and MW-9. Results of the Randy's Automotive facility assessment and wells sampling programs are further discussed below in Section 4.0.

S&S's historical soil and groundwater analytical results are provided in Tables 1 and 2, respectively. Soil and groundwater analytical results from the Randy's Automotive facility assessment are provided in Tables 3 and 4, respectively. Results from the well sampling program are provided in Table 5.

3.0 GEOLOGY AND HYDROGEOLOGY

3.1 Regional Geology and Hydrogeology

According to the United States Geological Survey 7.5 Minute Series Newport Beach, California Topographic Map Quadrangle, dated 1965 (photo-revised 1981), the Site is situated at an elevation of approximately 89 feet above sea level.

The site lies on the Newport Mesa of the Orange County Coastal Plain, within the Newport-Inglewood Fault Zone. The Orange County Coastal Plain is bounded on the east by the Santa Ana Mountains, on the south by the San Joaquin Hills, and to the west by the Pacific Ocean. The Coastal Plain is also bordered by the southern extension of the Newport-Inglewood Structural Zone along the southwest coastline and the El Modeno fault, which occurs at the eastern margin along the foothills of the Santa Ana Mountains (Yerkes et al., 1965; Bryant, 1988).

The Orange County Coastal Plain is underlain by more than 20,000 feet of middle Miocene and younger sediments. These sediments reflect both marine and non-marine deposition, with marine sediments dominating the older, deeper strata. The younger, shallower strata are mixed marine and non-marine which are topped with recent non-marine alluvium (California Department of Water Resources (DWR), 1967). The surficial geology consists of predominantly alluvial sediments deposited by low-to-moderate sinuosity tributaries of the Santa Ana River system. These alluvial sediments include gravel, sand, silty sand, and clayey silt with an average thickness of 140 feet (Poland et al., 1956; DWR, 1967).

A large synclinal groundwater basin is reported to underly the Orange County Coastal Plain, composed of a pressure and non-pressure area. The non-pressure, or fore-bay, area is located on the northeastern portion of the basin and supplies the recharge, both artificial and natural, to the regional aquifer systems. The southwestern area of the basin consists of a pressure area, where groundwater is confined in multiple aquifers (DWR, 1959). The subject property is located within this pressure area. The northern boundary for the Fore-bay/Pressure Area is located north of Santa Ana, along the eastern boundary of the Newport-Inglewood Fault Zone, and runs approximately parallel to the Interstate 5 freeway (Herndon, 1992). Groundwater within and west of the Newport-Inglewood Fault Zone are considered by the Santa Ana Regional Water Quality Control Board (SARWQCB) to have lower beneficial use standards (SARWQCB) due to high levels of Total Dissolved Solid (TDS) levels and brackish water content, as discussed during a meeting on February 22, 2006.

Groundwater flow in the coastal plain is from the fore-bay to the pressure area (generally southwest), with subsurface discharge to the Pacific Ocean during periods when piezometric levels are above sea level. Subsurface outflow occurs primarily at the Santa Ana and Alamitos Gaps in aquifers not affected by faulting (DWR, 1959). Principal aquifers are the Talbert aquifer of Recent age in the Santa Ana Gap, and its correlative Bolsa Aquifer in the northwesterly portion of the basin, which ranges in depth from 50 feet to nearly 200 feet below ground surface (bgs).

The subject property is located on the Newport Mesa and is reportedly underlain by the Semi-perched aquifer of the Orange County Groundwater Basin. This perched groundwater consists largely of irrigation return and infiltration of other surface waters above the confining sediments of the deeper aquifers. The Semi-perched aquifer is reportedly underlain by the aquifers of the Upper aquifer system (alpha, beta, lambda, omicron, and rho) which reportedly extend to a depth of approximately 600-700 feet bgs. The “main” aquifer is reported to underly the aquifers of the Upper aquifer system to depths greater than 1,500 feet bgs (Herndon, 1992).

Based on information obtained from Mr. Roy Herndon of the Orange County Water District (OCWD), the Semi-perched aquifer is composed primarily of silt and clay layers with intermittent sand stringers, and extends to a depth of approximately 90 feet bgs. According to Mr. Herndon, piezometric pressures within the water-bearing sand stringers decrease significantly with depth, which may indicate a vertical flow gradient of groundwater within the Semi-perched aquifer. However, no conclusive data has been published to date which would indicate hydraulic communication between the Semi-perched aquifer and the underlying aquifers of the Upper aquifer system. According to Mr. Herndon, groundwater depths within the Upper aquifer system fluctuate dramatically with changes in the site vicinity groundwater pumping activity; however, fluctuations of this nature have not been observed within the monitoring wells currently located at the subject site.

3.2 Site Specific Geology and Hydrogeology

Information obtained from the exploratory soil borings advanced on the property indicate that underlying sediments from surface grade to approximately 10 feet bgs consist primarily of fine to medium sands, underlain by well sorted coarse grained sands and gravels to approximately 30 feet bgs. Fine grained sediments consisting of silty clay and clayey silts have been encountered at select locations between approximately 18 and 36 feet bgs, and then underlain by silty fine sand to the maximum depth explored of approximately 40 feet bgs.

Depth to groundwater beneath the subject site ranges from approximately 20 to 22 feet bgs. During the October 2004 groundwater sampling event performed by S&S, the groundwater flow direction was calculated toward the northeast at an average gradient of 0.01 feet/foot (*S&S*, November 2004). However, during SECOR’s March 2 and 16, 2006 groundwater sampling event, groundwater was measured at depths ranging between 18.61 and 21.08 feet bgs. The groundwater flow direction was calculated, using the March 16, 2006 data, as being towards the north in the southern portion of the site and trending towards the east in the northern portion of the site. The gradient was calculated to flow at 0.002 feet/foot (ft/ft) in the northern portion of the site to 0.006 ft/ft in the southern portion of the site.

4.0 RANDY'S AUTOMOTIVE DUE DILIGENCE SITE ASSESSMENT AND GROUNDWATER MONITORING WELL SAMPLING

Between February 28 and March 2, 2006, an assessment of the Randy's Automotive facility and a groundwater monitoring well sampling program was performed at the site. The Phase II assessment was to provide data to determine whether any subsurface environmental conditions exist due to past and present site operations at the Randy's Automotive facility, and the well sampling program was to provide current data of the groundwater conditions beneath the site.

4.1 RANDY'S AUTOMOTIVE DUE DILIGENCE SITE ASSESSMENT

4.1.1 Soil Boring Drilling

Between February 28 and March 2, 2006, Kehoe Testing and Engineering (Kehoe), located in Huntington Beach, California, drilled 12 hydraulically driven soil borings (B-1 through B-12) at the site, with supervision performed by a SECOR staff member. Soil boring locations are shown on Figure 2. During drilling of soil borings B-1 through B-12, groundwater samples were collected using hydropunch type technology.

4.1.2 Laboratory Analysis

Collected soil and hydropunch groundwater samples were submitted to American Scientific Laboratories under proper Chain-of-Custody documentation, and analyzed for total petroleum hydrocarbons as diesel (TPHd) and TPH as oil (TPHo) using EPA Method 8015M, and for TPHg, BTEX, oxygenated compounds (MTBE, tertiary amyl methyl ether [TAME], di-isopropyl ether [DIPE], ethyl tertiary butyl ether [ETBE] and tertiary butyl alcohol [TBA]) and full scan volatile organic compounds (VOCs) using EPA Method 8260B.

4.2 GROUNDWATER MONITORING WELL SAMPLING

On March 2 and 16, 2006, SECOR conducted depth to LNAPL/groundwater gauging and sampling of site wells (MW-1 through MW-9) that did not contain measurable LNAPL at the site. Wells MW-2, MW-4, MW-5, and MW-6 were noted to contain measurable LNAPL amounts; therefore, these wells were not sampled, with the exception of the collection of product samples for possible future laboratory analysis. Wells MW-1, MW-3, MW-8, and MW-9 were purged a minimum of three casing volumes of water and groundwater samples were collected for laboratory analysis.

4.2.1 Laboratory Analysis

Collected groundwater samples were submitted to American Scientific Laboratories under proper Chain-of-Custody documentation, and analyzed for TPHd and TPHo using EPA Method 8015M, and for TPHg, BTEX, oxygenated compounds (MTBE, TAME, DIPE, ETBE and TBA) and full scan VOCs using EPA Method 8260B.

5.0 FINDINGS

5.1 RANDY'S AUTOMOTIVE DUE DILIGENCE SITE ASSESSMENT

5.1.1 Subsurface Conditions

Soils encountered during drilling generally consisted of sandy clay from the ground surface to approximately 5 to 8 feet bgs, and then underlain by coarse grained sediments of silty sand, sand and sand with fine gravel to the maximum depth explored of 26 feet bgs. Groundwater was first encountered during drilling at approximately 20 feet bgs.

5.1.2 Soil Sample Analytical Results

Based on the results of the laboratory analysis for soil samples collected from Soil Borings B-1 through B-12, TPHg was reported at concentrations ranging between 568 and 1,250,000 micrograms per kilograms (µg/kg). TPHg concentrations were reported in the 20 foot soil samples from borings B-1 through B-5. TPHd was reported at 43 and 924 milligrams per kilograms (mg/kg) in the 20-foot soil sample from borings B-5 and B-3, respectively. TPHo was not reported in any soil samples above the laboratory reporting limits (LRLs). Benzene was reported at concentrations ranging from 2 to 1,060 µg/kg. The highest concentrations were reported in the 20-foot soil samples from borings B-1, B-3, B-4 and B-8. MTBE was reported at concentrations ranging from 7 to 24 µg/kg in soil samples from borings B-10 through B-12 from the 20 and 25-foot depth intervals. TBA was reported in the 25-foot soil sample from B-11 at 284 µg/kg. VOCs reported include acetone, sec-butylbenzene, n-butylbenzene, isopropylbenzene, p-isopropylbenzene, p-isopropyltoluene, n-propylbenzene, naphthalene, and 1,2,4-trimethylbenzene (TMB), and 1,3,5-TMB. Soil sample analytical results are shown in Table 3.

5.1.3 Hydropunch Groundwater Sample Analytical Results

Based on the results of the laboratory analysis for hydropunch groundwater samples collected from borings B-1 through B-12, TPHg was reported at concentrations ranging from 419 to 1,070,000 micrograms per liter (µg/L). TPHd was reported at concentrations ranging from 1.3 to 542 milligrams per liter (mg/L), with the highest concentrations reported in borings B-2 and B-10. TPHo was not reported above the LRL. Benzene was reported at concentrations ranging from 39 to 4,330 µg/L, with the highest concentrations reported in borings B-1, B-2, B-4, B-8, B-10 and B-12. MTBE concentrations were reported at 344, 106 and 707 µg/L in borings B-6, B-7, and B-11, respectively. TBA was reported at concentrations of 73, 236, and 139 µg/L in borings B-6, B-7 and B-11, respectively. VOCs reported include sec-butylbenzene, isopropylbenzene, propylbenzene, n-propylbenzene, naphthalene and 1,2,4-TMB, and 1,3,5-TMB. Hydropunch groundwater sample analytical results are shown in Table 4 and on Figure 3.

6.0 GROUNDWATER MONITORING WELL SAMPLING

Depth to LNAPL and depth to groundwater measurements, and groundwater samples were collected on March 2, 2006. LNAPL was measured at thicknesses of 1.29 feet (well MW-2), 0.81 feet (well MW-4), 0.22 feet (MW-5) and 0.04 feet (MW-6). Groundwater was measured at depths ranging between 18.94 and 21.11 feet bgs. On March 16, 2006, SECOR measured LNAPL and groundwater measurements to validate the March 2, 2006 measurements. LNAPL was measured at thicknesses of 1.27 feet (well MW-2), 0.81 feet (well MW-4), 0.26 feet (well MW-5), and 0.04 feet (well MW-6). Groundwater was measured at depths ranging between 18.61 and 21.08 feet bgs. The groundwater flow direction was calculated, using the March 16, 2006 data, as being towards the north in the southern portion of the site and trending towards the east in the northern portion of the site. The gradient was calculated to flow at 0.002 feet/foot (ft/ft) in the northern portion of the site to 0.006 ft/ft in the southern portion of the site. Groundwater elevation and LNAPL thickness data are shown in Table 5 and a groundwater elevation contour map is provided on Figure 4.

Based on the results of the laboratory analysis for groundwater samples collected from wells MW-1 through MW-9, TPHg was reported at concentrations of 436 μg/L (well MW-3), 994 μg/L (well MW-7), and 166 μg/L (well MW-9). TPHd was reported at concentrations of 0.6 mg/L (well MW-3), 0.9 mg/L (well MW-7), and 1.4 mg/L (well MW-9). MTBE concentrations were reported at 19.8 μg/L (well MW-1), 5.5 μg/L (well MW-3), 934 μg/L (well MW-7), 18.6 μg/L (well MW-8), and 141 μg/L (well MW-9). TPHo, benzene, and TBA were not reported above the LRLs. Groundwater sample analytical results are shown in Table 5 and on Figure 5.

7.0 CONCLUSIONS

The purpose of the Phase II assessment was to provide data to determine whether any subsurface environmental conditions exist due to past and present site operations at the Randy's Automotive facility, and to provide current data regarding the groundwater conditions beneath the site. Based on the review of the soil and groundwater analytical data collected during the Randy's Automotive facility assessment, very limited hydrocarbon impact was reported in soil samples collected from borings B-1 through B-12 above 20 feet bgs. The majority of reported hydrocarbon concentrations were in the 20 and 25-foot samples, collected within the capillary fringe and saturated zones. The highest hydrocarbon concentrations were detected in the areas of LNAPL measured in the site wells, particularly well MW-2. The lack of reportable hydrocarbon concentrations in the 5, 10 and 15-foot soil samples appears to indicate that the areas assessed at Randy's Automotive facility are not source areas for the LNAPL and dissolved-phase hydrocarbon plumes beneath the site.

Based on the review of the groundwater monitoring and sampling data collected from site wells MW-1 through MW-9, measurable LNAPL continues to be identified in wells MW-2, MW-4, MW-5 and MW-6. Groundwater analytical data shows that dissolved-phase hydrocarbons are reported in wells MW-1, MW-3, MW-7, MW-8 and MW-9. MTBE concentrations continue to be identified at elevated levels in wells MW-1 and MW-7, located in the northeast portion of the site (a former gasoline service station is located directly east across Harbor Boulevard from the wells), and in well MW-9 located on the southern property boundary. When comparing the recent groundwater analytical data to the S&S October 2004 groundwater analytical data, dissolved-phase hydrocarbons have decreased in concentrations. The notable decrease may be attributed to natural biodegradation processes occurring in groundwater beneath the site. However, to verify whether or not natural biodegradation of hydrocarbons is occurring, biodegradation parameters would need to be sampled and analyzed for. Additionally, the dissolved-phase hydrocarbon plume continues to not be defined laterally in all directions.

8.0 REMEDIAL ACTION PLAN

The purpose of the proposed remedial action is to provide a technology for the treatment of the absorbed-phase hydrocarbons in soil and the LNAPL plume beneath the Site.

8.1 REMEDIAL GOALS FOR SITE CLEANUP

Remedial goals are established to assist in determining an end point for site remediation. Based on discussions with the Santa Ana Regional Water Quality Control Board (SARWQCB) during the February 22, 2006 meeting between the SARWQCB, SECOR and Mr. Phil Clark with CEC, sites located west or within the Newport-Inglewood Fault Zone may have lower groundwater cleanup standards. Based on the review of geologic maps and the City of Costa Mesa General Plan Geological Map (Costa Mesa, 2002), the site has been identified to lie within the western portion of the Newport-Inglewood Fault Zone. Additionally, the site has been initially proposed for redevelopment as either commercial or retail business. However, RMRG may consider residential uses for the western portion of the property. Therefore, SECOR proposes the following remedial goals for the site:

- Soils: The removal of absorbed-phase hydrocarbons on soil to asymptotic mass removal rates at low concentrations to reduce the threat to human health of future occupants and users of the site, post redevelopment; and

- Groundwater: The removal of LNAPL from groundwater beneath the site. No active remediation of the dissolved-phase hydrocarbon plume is recommended for the site.

8.2 SELECTION OF REMEDIAL ACTION ALTERNATIVE

8.2.1 Evaluation of Remediation Alternatives

Preliminary selection of the remedial alternatives was performed in conjunction with both the long-term redevelopment goals for the Site and the general applicability. SECOR considered the various selection criteria to determine the most feasible technology(ies) for the mitigation of absorbed-phase hydrocarbons in soil and the LNAPL plume at the site. SECOR evaluated three options for the treatment of petroleum hydrocarbon impacted soil and four options for the treatment of LNAPL. The three options evaluated for the treatment of the soil are excavation, natural attenuation and soil vapor extraction (SVE). The options evaluated for the treatment of LNAPL were pump and treat, natural attenuation, air sparging, and LNAPL removal using total fluids pumps and/or passive skimmers. The evaluation of options for soil and groundwater are provided in Tables 6A and 6B, respectively. These alternatives are discussed below.

8.3 Soil Treatment Options

8.3.1 Excavation

Excavation is a cost-effective method for the treatment of small volumes and/or shallow soil contamination. Excavation has the advantage of ensuring that the contaminated soil is removed. Excavation also has many disadvantages. The site is large, greater than 2 acres in size, with contamination extending to groundwater at a depth of approximately 20 feet bgs. The soil at the subject site is primarily coarse-grained deposits of sandy material above groundwater that would require significant sloping or shoring if the site was excavated. Considering the costs to complete the excavation including the loss of business, and shoring, along with the actual excavation costs this option was not selected.

However, since the site is to be redeveloped, spot excavation is proposed during the construction phase of the redevelopment if deemed appropriate. Spot excavation may occur if shallow impacted soils are encountered. The purpose of this excavation work will be to assist in the over-all remedial efforts, and to reduce health risks to future occupants and users of the site post redevelopment.

8.3.2 Natural Attenuation

Natural attenuation is the most technically and cost effective method to treat low levels of degradable compounds. Natural attenuation is not suitable for sites where the remaining contamination would pose a significant risk to the groundwater or a health risk to persons on site. Natural attenuation was considered not to be the most viable option (at this time) due to the magnitude of the contamination and the site geology. The sandy lithology was thought to increase the possibility that the contamination would further migrate towards groundwater and allow vapor migration that may pose a future health risk. Natural attenuation may be proposed in the future when the risk of further groundwater contamination and health risk has been reduced.

8.3.3 Soil Vapor Extraction

SVE is the process of removing volatile compounds from the soil through in-situ evaporation. SVE is also believed to assist in the removal of LNAPL from the site and enhancing natural attenuation by supplying oxygen to the subsurface. Based on the Site lithology, and the additional benefits of SVE in LNAPL removal and supplying oxygen to the subsurface, this technology was chosen for remediation of the soil at the subject site.

To design the SVE treatment system, an SVE pilot test is recommended. The SVE test will be performed to determine the number of wells and type of SVE system (SVES) required to treat impacted soil at the site. The SVE pilot test will be performed to determine the system-applied vacuum, flow rates, mass, and radius of influence.

8.4 Groundwater Treatment Options

8.4.1 Pump and Treat

Groundwater extraction and treatment (pump and treat) is a common method used for groundwater remediation. However, due to the low solubility of hydrocarbons in groundwater, pump and treat requires vast amounts of groundwater to be extracted to reduce contaminants to target cleanup levels. Groundwater remediation through pump and treat may take decades to complete. Due to its technical drawbacks (long remediation time), pump and treat was not selected.

8.4.2 Natural Attenuation

Studies have shown the most hydrocarbon plumes in groundwater will at some point become stable and stop migrating, and over time will naturally attenuate on their own. The rate at which hydrocarbon plumes naturally attenuate is dependant upon many factors, including background oxygen levels in the vadose zone and in the groundwater, groundwater velocity, and soil chemistry. Natural attenuation is less effective when LNAPL are in contact with the groundwater (i.e. floating free product). Since LNAPL has been noted on groundwater at the site and concentrations of dissolved phase hydrocarbons are noted in groundwater, natural attenuation is not being selected at this time. However, when the LNAPL has been removed, natural attenuation may be considered.

8.4.3 Air Sparging

Air sparging is the injection of air into the saturated zone (groundwater) causing the volatile hydrocarbons to partition into the vapor phase where they can be captured by a vapor collection system. In addition, the injection of air into the subsurface increases the dissolved oxygen concentrations in groundwater, thus increasing the biological degradation of the contaminants. Air sparging is a widely used technology for the treatment of hydrocarbons in groundwater. The effectiveness of air sparging is dependent upon the stripping efficiency of the injected air and on the successfulness of enhancing the natural biodegradation. Since air sparging is only effective where the air can come into contact with the impacted water, it is critical in any air sparging system to ensure adequate coverage. Due to the significant presence of measurable LNAPL, air sparging is not being selected at this time

8.4.4 LNAPL Removal

The selection of an LNAPL removal system is based on the remedial goals, site conditions, and design constraints. Site conditions include the volume of LNAPL, type, areal extent, depth, and hydraulic conductivity and permeability of the saturated zone. The goal of the remedial system is the collection of LNAPL with little to no groundwater recovery. LNAPL removal includes both passive and active technologies. Passive technologies include the installation and monitoring of skimmers in wells with measurable LNAPL. Active technologies include the installation and monitoring of pumps in wells with measurable LNAPL, which may or may not provide migration control of the LNAPL plume. Based on the relative stability of the LNAPL plume, either passive skimmers and/or top loading total fluid pumps are chosen for remediation of the LNAPL plume at the site.

To design the LNAPL removal system, a product bail down test is recommended. The product bail down test will be performed to determine the ability to remove LNAPL from the saturated zone, quantities, recovery rates, and number of wells required to treat impacted groundwater at the site. The product bail down test will involve LNAPL removal from a well by bailing and measuring the thickness of and depth to LNAPL in the well as it recovers. The removed LNAPL will be stored on site in DOT approved 55-gallon drums, with secondary containment, pending disposal to an appropriate state certified facility.

9.0 SCOPE OF WORK

Soil and groundwater analytical data shows that the subsurface has been impacted with LNAPL and dissolved phase hydrocarbons. To accomplish the objectives of this RAP, SECOR proposes the following scope of work:

- Conduct SVE pilot and product bail down tests;
- Design, permit, and construct the remedial systems;
- Conduct LNAPL removal based on the results of the product bail down test;
- Conduct SVE to treat the soil and any remaining LNAPL on groundwater;
- Evaluate the influent hydrocarbon concentrations through time; and
- After LNAPL has been removed, implement a post remediation groundwater monitoring program.

10.0 SITE REMEDIATION

10.1 Soil Vapor Extraction

10.1.1 Equipment

A thermal/catalytic oxidizer and/or granular activated carbon SVES will be used to extract and treat vapors. The number and location of SVE wells will be dependent upon the results of the SVE pilot test. Wells currently intended for incorporation into the system includes the wells with LNAPL (MW-2, MW-4, MW-5, and MW-6). Additional wells installed for groundwater treatment may or may not be incorporated into the vapor extraction system.

The SVES will operate under a permit issued by the south coast air quality management district (SCAQMD). SVE wells will be individually connected through conveyance piping to a manifold through above or underground remedial system conveyance piping. Each SVE well will be individually manifolded to allow for control of each well at the compound. Sample ports installed on individual conveyance piping at the manifold and before the oxidizer will be used to collect system influent air samples. A second sample port will be located at the stack in order to collect effluent vapor samples. The SVES will operate using electricity and natural gas supplied by the local utility companies.

10.1.2 SVE Procedures

The SVES will be operated under its maximum output parameters relative to site conditions. The SVES will be operated to maintain a combustion temperature above 1400 degrees Fahrenheit (F) in the thermal mode and above 650 degrees F in the catalytic mode to comply with the SCAQMD requirements. Influent vapor stream samples will be collected and analyzed with a flame ionization detector weekly to evaluate remedial progress. Tedlar™ bag samples will be collected monthly and analyzed for TPHg; BTEX; and oxygenates using EPA Methods 8015m and 8260B.

10.2 LNAPL Removal

10.2.1 Groundwater Remediation Wells

Additional groundwater remediation wells may be installed at the site in the area of LNAPL for the treatment of groundwater. Wells will be installed using hollow stem auger drilling equipment and sampled every 5 feet to determine soil lithology up to a total depth drilled of approximately 35 feet bgs. Each well will be constructed using 4-inch diameter Schedule 40 PVC casing screened from 5 to 35 feet bgs. A concrete slurry will then be installed from grade to 5 feet bgs. The screened interval will consist of 0.020-inch factory-slotted well screen. The filter pack will consist of either a 12 x 20 or No. 3 sand.

10.2.2 LNAPL Removal Equipment

Dependant upon the results of the product bail down test, the LNAPL removal equipment may either consist of passive skimmers or top loading total fluids pumps installed in select wells. If a total fluids pump system is chosen, an air compressor and timers will be used to supply the air for pneumatic operation of the LNAPL removal system. Compressed air will be regulated to the desired pressure and brought to the pumps through above and/or underground remedial system conveyance piping. Each well will be individually manifolded to allow for control of each well at the compound. The removed LNAPL will be pumped to an on site storage tank, with secondary containment, for storage pending disposal to an appropriate state licensed facility.

If passive skimmers are installed in site wells for LNAPL removal the skimmers will be monitored on a weekly basis during SVES operation and maintenance (O&M). Collected LNAPL will be placed into DOT approved 55-gallon drums, installed in secondary containment over-pack drums for storage pending disposal to an appropriate state licensed facility.

10.2.3 LNAPL Removal Procedures

The LNAPL removal system will be optimized through adjusting air pressures and cycling times. No specific sampling will be performed on the remediation wells to optimize the system.

10.3 SYSTEM EVALUATION AND REMEDIAL GOALS

SECOR will evaluate the SVES influent vapor concentration and flow rate for hydrocarbon destruction efficiency and the LNAPL removal rates monthly. When SVES concentrations have dropped to asymptotic mass removal rates at low concentrations, the system will be turned off for period of time and allowed to rebound. The SVES will be cycled in this fashion until it is determined that the remaining petroleum hydrocarbons pose no significant health risk.

10.4 SITE COMPLIANCE REQUIREMENTS

Soil and groundwater assessments have been performed at the site by S&S. Periodic monitoring and reporting of the site groundwater conditions have been performed, without complying to the State Water Resources Control Board (SWRCB) and SARWQCB directives for leaking underground storage tank (UST) sites and requirements for uploading data to the SWRCB GeoTracker database; the site appears to be out of compliance. Therefore, to bring the site into compliance, groundwater monitoring and sampling of site wells on a quarterly schedule, upload of soil and groundwater analytical data, and reporting to the SWRCB GeoTracker database is recommended.

10.4.1 Quarterly Groundwater Monitoring Program

Groundwater sampling activities involve several activities including groundwater and LNAPL depth measurements, well purging, sample collection, waste water disposal, etc. The procedures for conducting these activities are described below.

10.4.2 Depth to Groundwater/LNAPL Thickness Measurements

Prior to purging each of the wells, the depth to groundwater and thickness of LNAPL (if present) within each well casing is measured to the nearest 0.01 foot using either an electronic water level indicator or an electronic oil-water interface probe. Measurements are taken from a point of known elevation on the top of each well casing as determined in accordance with previous surveys.

10.4.3 Groundwater Monitoring Well Purging

Groundwater wells may or may not be purged depending on the requirements of the project. Where purging is conducted prior to sampling wells that do not contain LNAPL, a dedicated 1-inch diameter PVC "stinger," bailer or groundwater pump may be used to purge the wells. Purge water may be discharged directly to a vacuum truck via the “stinger” or contained on-site in 55-gallon DOT-approved drums. To assure that the collected samples were representative of fresh formation water, the conductivity, temperature, and pH of the delivered effluent are monitored and recorded using a triple meter during purge operations. In addition, the turbidity of the removed water is visually monitored and recorded. Purge operations are determined to be sufficient once successive measurements of pH, conductivity, and temperature stabilize to within +/- 10 percent.

During purging, a minimum of three well volumes, measured as the annular space of the well casing below the groundwater surface, are removed from each well. However, in the case of very slow recharging wells, purging is deemed sufficient if the well contents are completely evacuated during purge operations. Unless recharge takes more than a couple of hours, wells are sampled once the well is recharged to within 80 percent of pre-purge groundwater elevation. For very slow recharging wells (wells pumped dry during purging), samples may be collected after 2 hours of recharge.

10.4.4 Groundwater Sample Acquisition and Handling

Following purging operations, groundwater samples are collected from each of the wells at the air-water interface, using pre-cleaned, single-sample polypropylene, disposable bailers. The groundwater sample is discharged from the bailer to the sample container through a bottom emptying flow control valve to minimize volatilization.

Collected water samples are discharged directly into laboratory provided, pre-cleaned, 40-milliliter (ml) glass vials and/or one liter amber bottles and sealed with Teflon-lined septum, screw-on lids. Labels documenting sample number, well identification, collection date and time, type of sample, and type of preservative (if applicable) are affixed to each sample. The samples are then placed into an ice-filled cooler for delivery under Chain-of-Custody to a laboratory certified to perform the specified tests by the State of California Department of Health Services Environmental Laboratory Accreditation Program. The groundwater samples will be analyzed for TPHd and TPHo using EPA Method 8015M, and TPHg, BTEX, and oxygenate compounds (MTBE, TAME, DIPE, ETBE and TBA) using EPA Method 8026B.

10.4.5 Trip and Duplicate Blanks

To assure the quality of the collected samples and to evaluate the potential for cross contamination during transport to the laboratory, a distilled-water trip blank accompanies the samples in the cooler. Additionally, in order to verify the accuracy and precision of the analytical laboratory a blind duplicate blank will be collected from one of the wells. The duplicate blank will be labeled in such a way as to not identify the well the sample was collected from. The trip and duplicate blanks will be analyzed for TPHd and TPHo using EPA Method 8015M, and TPHg, BTEX, and oxygenate compounds (MTBE, TAME, DIPE, ETBE and TBA) using EPA Method 8026B.

10.4.6 Containment and Disposal of Generated Water/LNAPL

All wastewater, purge water and LNAPL (if present) generated during the field activities may be retained on-site in appropriate containers (i.e. DOT approved drums or bulk tanks) for future disposal, if purging is not performed by a vacuum truck. All wastewater will be delivered under appropriate manifest to a facility certified and licensed to receive such waste streams.

10.5 SWRCB GeoTracker

Currently the site appears to be out of compliance with the SWRCB and SARWQCB requirements. To bring the site back into compliance, SECOR proposes that site data collected during S&S's assessments not be required to be uploaded to GeoTracker. This is due to the fact that neither SECOR nor RMRG have access to S&S's electronic files including the reports, geo-maps, boring logs, survey data, and laboratory electronic data files (EDFs). However, SECOR does recommend that the current data collected during the Randy's Automotive facility assessment and groundwater monitoring well sampling program be uploaded to GeoTracker, along with future assessment, monitoring, and system O&M data.

10.6 Water Production Well/Receptor Survey

SECOR will perform a survey to identify the location and distance to potential receptors including water production wells, schools, day care, elderly care facilities, fresh-water surface waters, and salt-water surface waters. The results of the survey will be documented in a report to be submitted to the SARWQCB including text, table listing the receptors, and a map showing the location and distance to the receptor from the site.

10.7 Soil Vapor Survey and Human Health Risk Assessment

SECOR will perform a soil vapor survey and human health risk assessment (HHRA) to verify whether or not any risks to human health exist due to the hydrocarbon impacts at the site and to determine the effectiveness of the remedial actions. The soil vapor survey will be performed in accordance with DTSC's advisory on Active Soil Gas Investigations (Cal-EPA, 2003). The survey will be performed across the site with soil vapor samples collected at 5 and 18 feet bgs. The results of the survey will be used in the HHRA to evaluate risks from exposure to vapor intrusion.

The primary goal of the HHRA will be to estimate residual human health risks to future commercial/industrial workers on these properties using risk assessment methods generally accepted by regulatory agencies in the state of California. Based on the information currently available, onsite human exposure to the chemicals detected in groundwater, soil, and soil vapor under the site may occur as a result of vaporization of VOCs in the subsurface through the soil to the ground surface and direct contact with surface soil. This conclusion is based on the following assumptions:

- Groundwater under the site will never be used for potable purposes; and
- Direct physical contact with groundwater will not occur.

Exposure to VOCs from indoor vapor intrusion will be assessed using the results of the soil vapor survey and the Johnson and Ettinger (J&E) models. Site-specific soil parameters including fraction of organic carbon (FOC), porosity, soil moisture, effective porosity, and bulk density will be collected and used in the DTSC-modified J&E models, as appropriate.

Only chemicals detected in one or more (groundwater, soil gas, or soil) samples will be considered in the HHRA. The USEPA statistical program Pro-UCL will be used to determine exposure point concentrations. Once the exposure point concentrations are determined, cancer slope factors and reference doses recommended by the DTSC will be used along with exposure factors taken from the Cal-EPA or USEPA guidance manuals to estimate lifetime excess cancer risk and chronic hazard.

Once the risk and hazard calculations have been completed, the results will be written up in a report format. The report will include appropriate figures showing the site and soil vapor/soil/monitoring well locations and tables containing the sample datasets, exposure calculations, toxicity values, and risk/hazard results.

11.0 REPORTING AND PROGRESS TOWARD CLOSURE

SECOR will summarize the data collected during the remedial activities into a report documenting the performance of the SVE pilot test. The construction and installation of the site remedial system, along with startup and troubleshooting will also be documented in a separate report.

Remedial progress reporting will be completed in accordance with all permit requirements and conditions specified by SARWQCB. Generally, this requires quarterly report submittal (operations, status, and groundwater monitoring and sampling reports) to the SARWQCB by the 15th day following the end of each calendar quarter.

The initial report will contain details about the SVE system status and operation, monitoring records, and progress evaluation, along with LNAPL removal and results of groundwater sampling. Also, progress toward closure will be reported along with any modifications or other significant information that may affect the operation of the SVE system.

When absorbed-phase hydrocarbon levels have decreased to below acceptable regulatory levels or show a continual decreasing trend and LNAPL has been removed, SECOR will prepare a work plan that outlines the completed remedial efforts, and presents the methodologies for the completion of the necessary confirmation soil borings drilled to the water table (currently 20 feet bgs). The work plan will also outline a time frame for verification groundwater sampling (a minimum of eight quarters).

Upon agency approval of the work plan, the verification borings will be drilled with soil samples collected at five-foot intervals to a total depth of 20 feet bgs, and submitted for appropriate chemical analysis. Following receipt of acceptable analytical results (i.e. proposed clean-up levels), a Site Closure Report will be generated and submitted to the SARWQCB. Following receipt of a SARWQCB closure letter, SECOR will abandon wells by over drilling or pressure grouting and remove the remediation compound.

12.0 LIMITATIONS

The conclusions and recommendations contained in this report/assessment are based upon professional opinions with regard to the subject matter. These opinions have been arrived at in accordance with currently accepted hydrogeologic and engineering standards and practices applicable to this location and are subject to the following inherent limitations:

1. SECOR derived the data in this report primarily from visual inspections, examination of records in the public domain, and interviews with individuals having information about the site. The passage of time, manifestation of latent conditions, or occurrence of future events may require further exploration at the site, analysis of the data, and re-evaluation of the findings, observations, and conclusions in the report.

2. The data reported and the findings, observations, and conclusions expressed in the report are limited by the scope of the work. The scope of the work was defined by the request of the client, the time and budgetary constraints imposed by the client, and availability of access to the site.

3. Because of the limitations stated above, the findings, observations, and conclusions expressed by SECOR in this report are not, nor should not be, considered an opinion concerning the compliance of any past or present owner or operator of the site with any federal, state, or local law or regulation.

4. No warranty or guarantee, whether expressed or implied, is made with respect to the data reported of findings, observations, and conclusions that are based solely upon site conditions in existence at the time of investigation.

5. SECOR ESA reports present professional opinions and findings of a scientific and technical nature. While attempts were made to relate the data and findings to applicable environmental laws and regulations, the report shall not be construed to offer legal opinion or representations as to the requirements of, nor compliance with, environmental laws, rules, regulations, or policies of federal, state, or local government agencies. Any use of the ESA report constitutes acceptance of the limits of SECOR's liability. SECOR's liability extends only to its client and not to any other parties who may obtain the ESA report. Issued raised by the report should be reviewed by appropriate legal counsel.

6. The conclusions presented in this report are professional opinions based on data described on this report. They are intended only for the purpose, site location, and project indicated. This report is not a definitive study of contamination at the site and should not be interpreted as such. An evaluation of subsurface soil and groundwater conditions was not performed as part of this investigation. No sampling or chemical analyses were performed or assessment of asbestos-containing materials was completed as part of this study unless explicitly stated.

7. This report is based, in part, on unverified information supplied to SECOR by third-party sources. While efforts have been made to substantiate this third-party information, SECOR cannot guarantee its completeness or accuracy.

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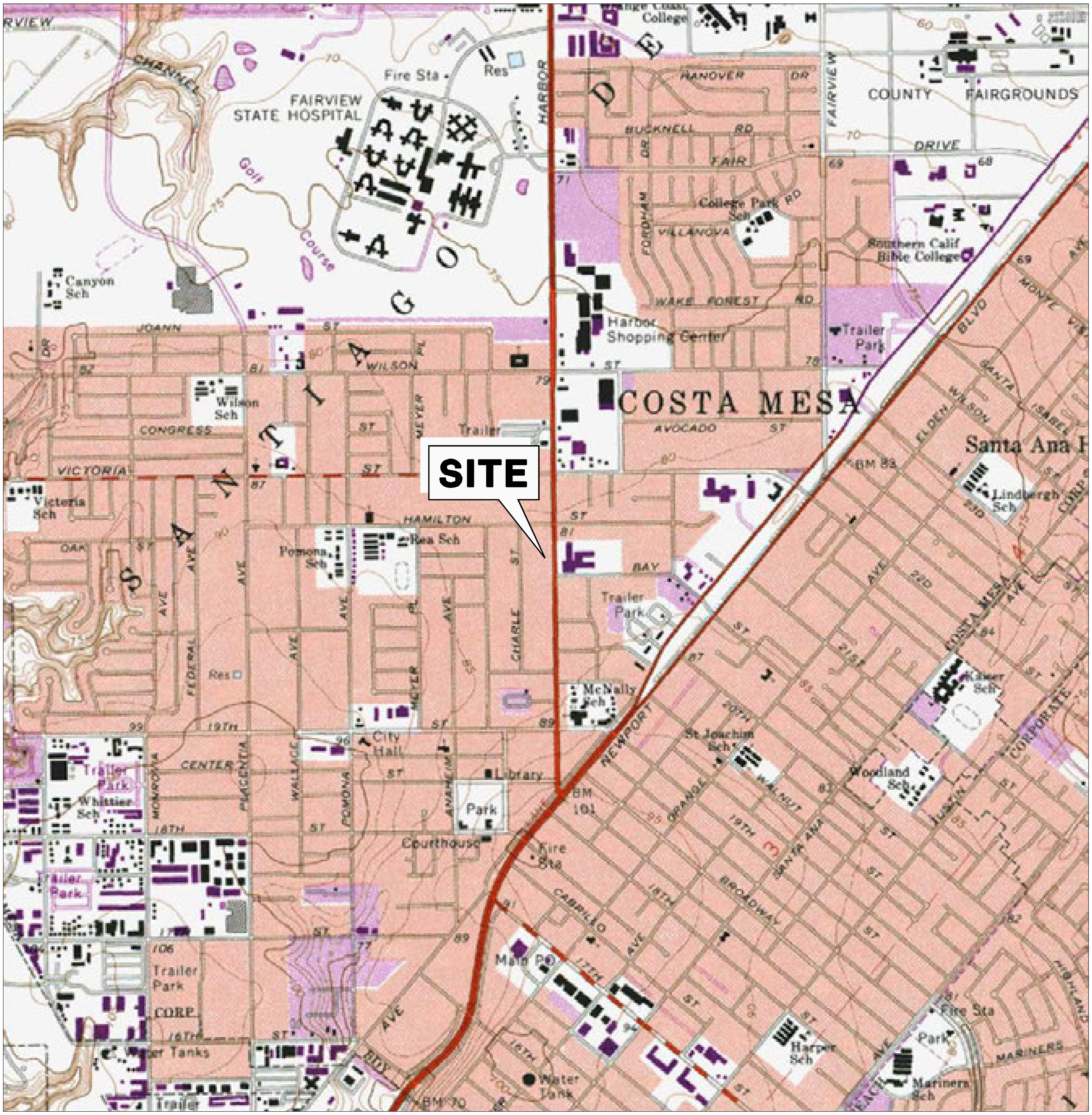
FIGURES

Remedial Action Plan
Red Mountain Retail Group
SW Corner of Hamilton Street and Harbor Boulevard
Costa Mesa, California
14OT.08560.01.0004
April 3, 2006



NORTH

SCALE

1 inch = 2000 feet

0 1000 2000

REFERENCE: USGS 7.5 MINUTE QUADRANGLE; NEWPORT BEACH QUADRANGLE, CALIFORNIA; REVISION DATE 1981

SECOR

11085 KNOTT, AVENUE, SUITE B
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PREPARED FOR:				FIGURE:
RED MOUNTAIN RETAIL GROUP RANDY'S AUTOMOTIVE 2089 HARBOR BOULEVARD COSTA MESA, CALIFORNIA		SITE LOCATION MAP		1
JOB NUMBER: 14OT.08560.01.0003	DRAWN BY: G. KAYA	CHECKED BY: B. BEESLEY	APPROVED BY: K. BROWN	DATE: MARCH 2006

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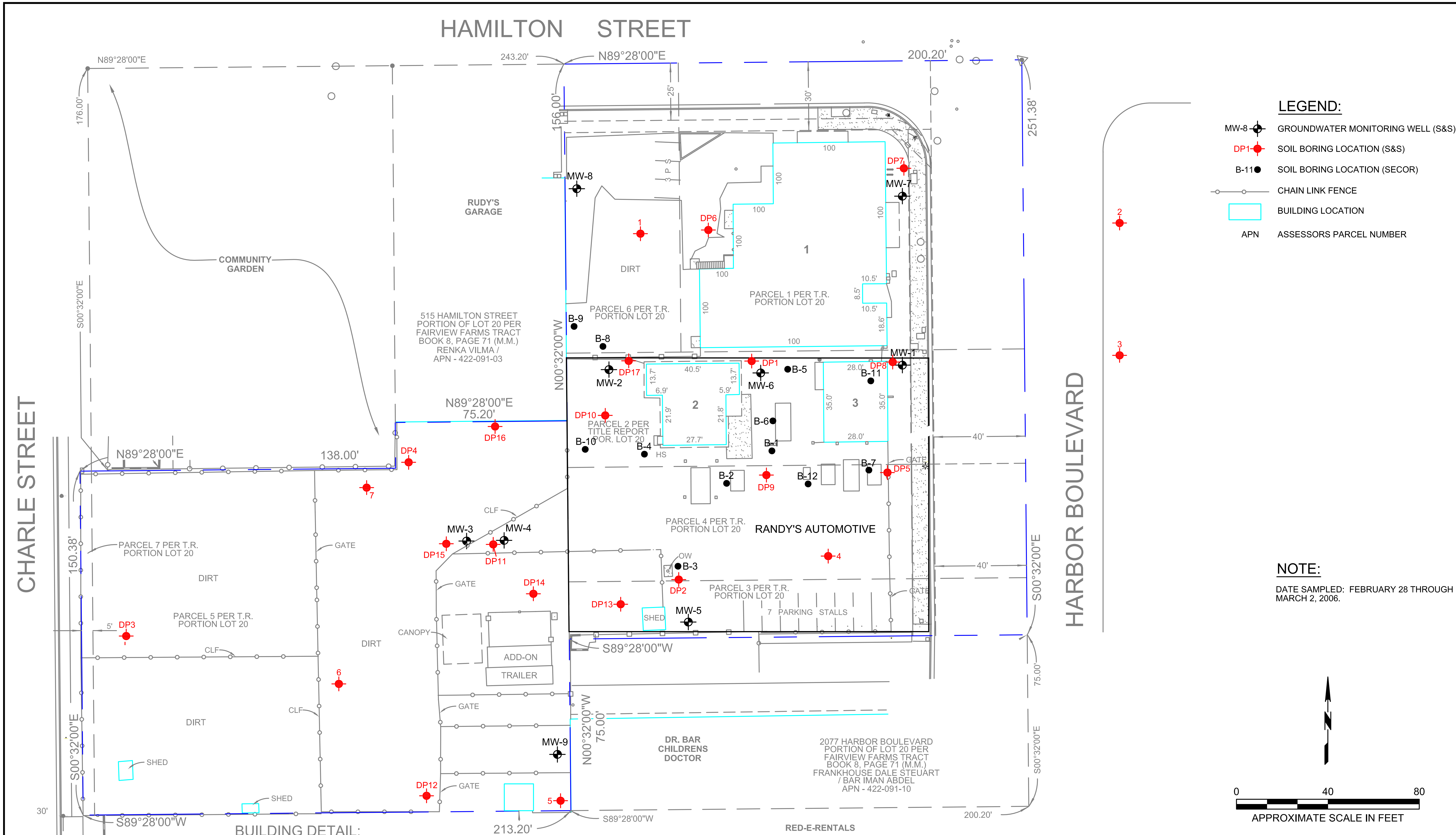
8560_1Q06(FIG.1)



BUILDING DETAIL:

BUILDING
1 — (GROUND AREA = 5,909 SQUARE FEET)
1 STORY WOOD FRAME/ STUCCO
(HEIGHT = 20'±)

BUILDING
2 — (GROUND AREA = 1,163 SQUARE FEET)
1 STORY WOOD FRAME/ STUCCO
(HEIGHT = 13'±)

BUILDING
3 — (GROUND AREA = 980 SQUARE FEET)
1 STORY WOOD FRAME/ STUCCO
(HEIGHT = 14'±)
BOOK 8, PAGE 71 (M.M.)
CITY OF COSTA MESA
APN - 422-091-04

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RANDY'S AUTOMOTIVE
2089 HARBOR BOULEVARD
COSTA MESA, CALIFORNIA

SITE MAP

FIGURE: 2

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
14OT.08560.01.0002	G. KAYA	B. BEESLEY	K. BROWN	MARCH 2006

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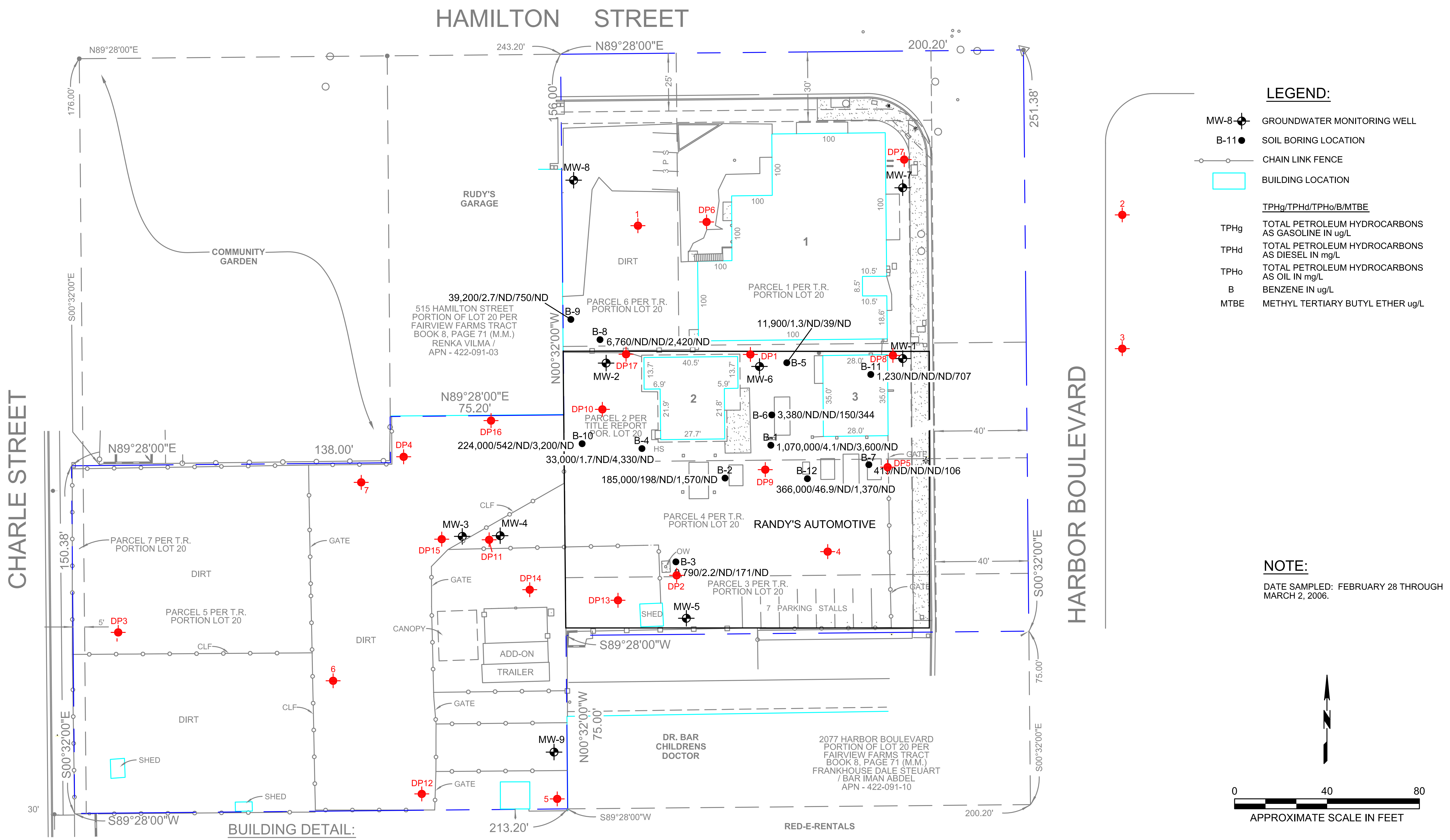
8560_1Q06(FIG.2)



BUILDING DETAIL:

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1 — (GROUND AREA = 5,909 SQUARE FEET)
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(HEIGHT = 14'±)

BOOK 8, PAGE 71 (M.M.)
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RANDY'S AUTOMOTIVE
2089 HARBOR BOULEVARD
COSTA MESA, CALIFORNIA

HYDROPUNCH GROUNDWATER CONCENTRATION MAP

FIGURE: 3

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
14OT.08560.01.0002	G. KAYA	B. BEESLEY	K. BROWN	MARCH 2006

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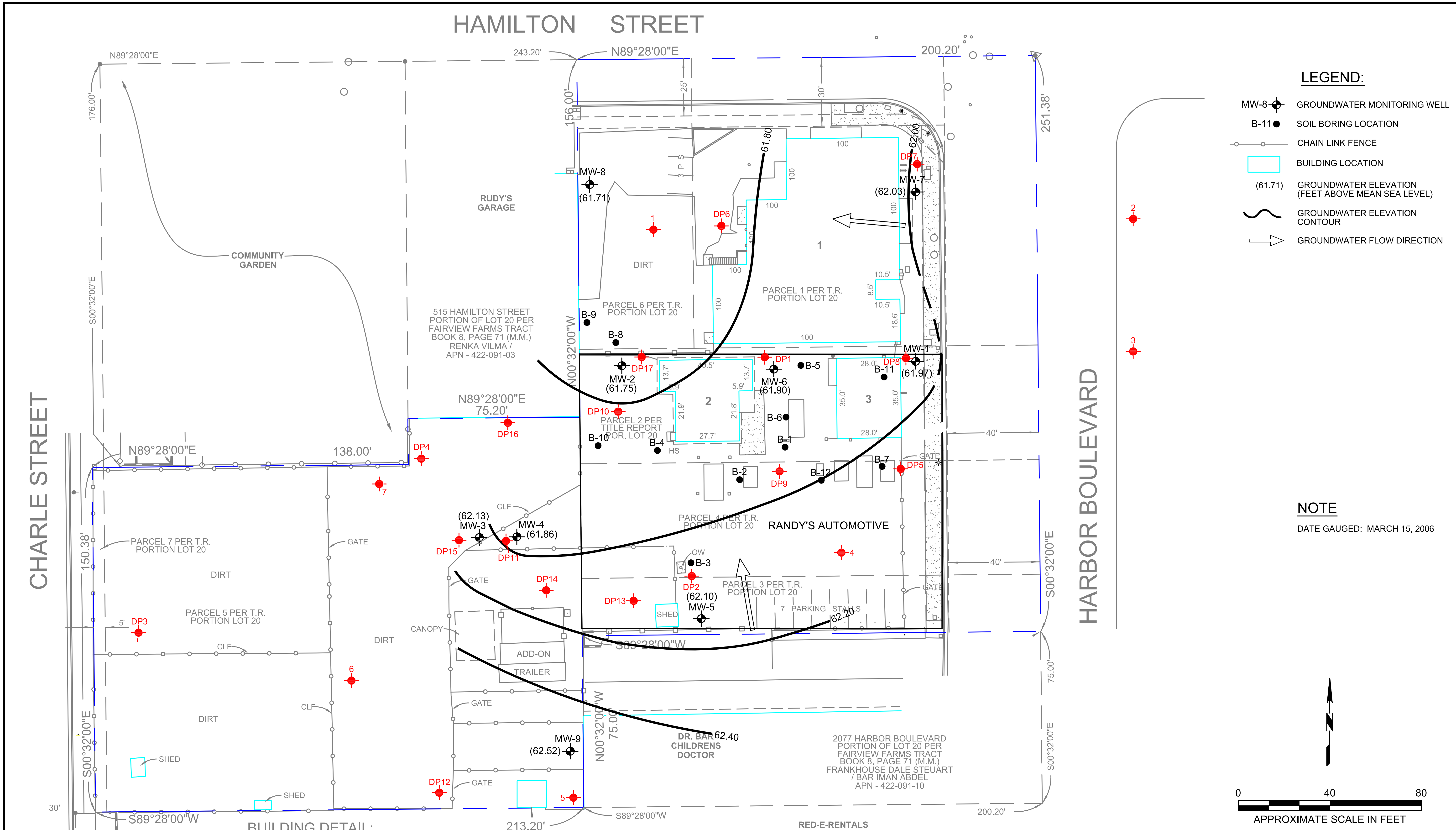

BUILDING DETAIL:

BUILDING
1 — (GROUND AREA = 5,909 SQUARE FEET)
1 STORY WOOD FRAME/ STUCCO
(HEIGHT = 20'±)

BUILDING
2 — (GROUND AREA = 1,163 SQUARE FEET)
1 STORY WOOD FRAME/ STUCCO
(HEIGHT = 13'±)

BUILDING
3 — (GROUND AREA = 980 SQUARE FEET)
1 STORY WOOD FRAME/ STUCCO
(HEIGHT = 14'±)

BOOK 8, PAGE 71 (M.M.)
CITY OF COSTA MESA
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RANDY'S AUTOMOTIVE
2089 HARBOR BOULEVARD
COSTA MESA, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP

FIGURE: 4

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
14OT.08560.01.0002	G. KAYA	B. BEESLEY	K. BROWN	MARCH 2006

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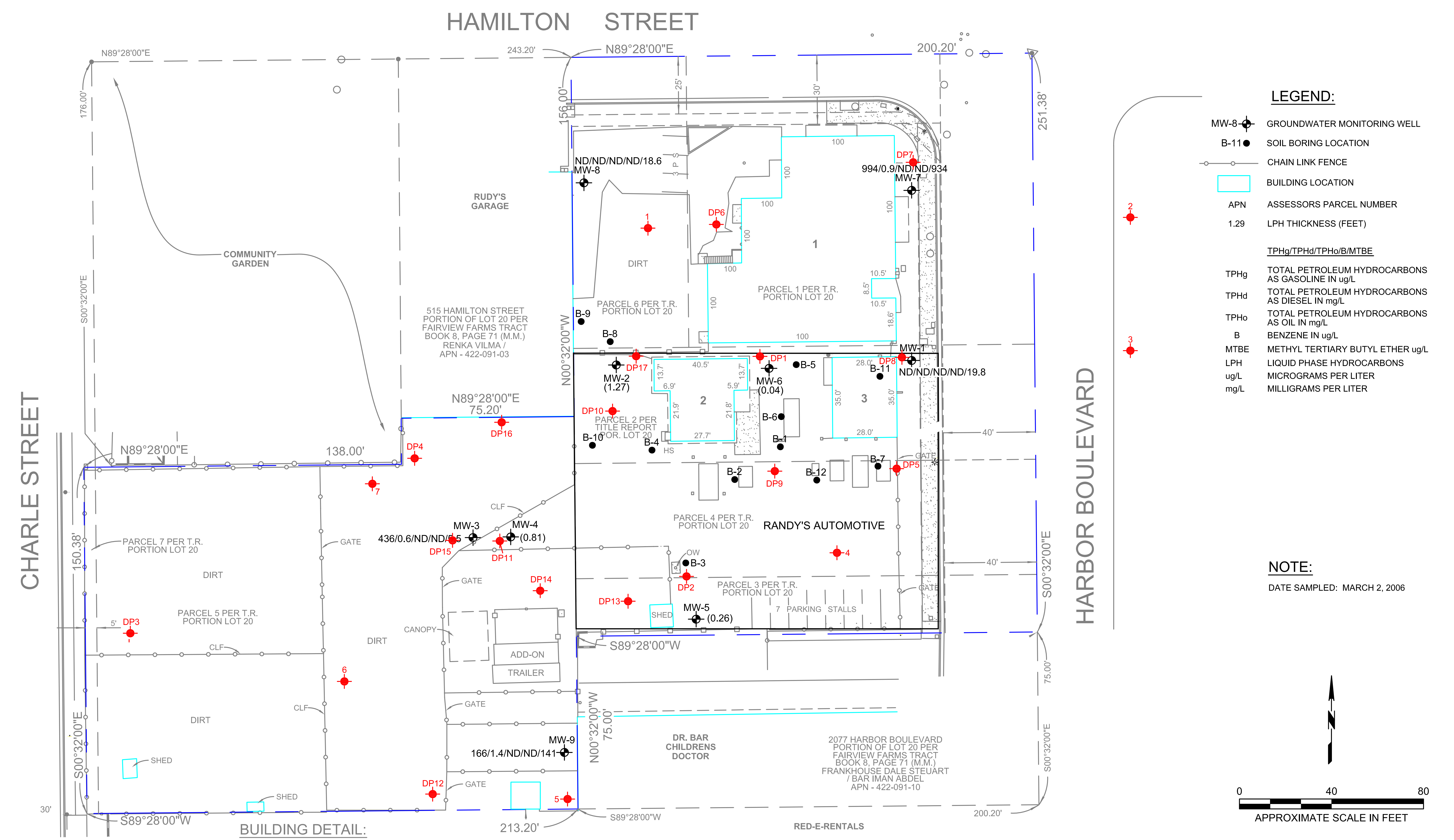

BUILDING DETAIL:

BUILDING 1 — (GROUND AREA = 5,909 SQUARE FEET) 1 STORY WOOD FRAME/ STUCCO (HEIGHT = 20'±)

BUILDING 2 — (GROUND AREA = 1,163 SQUARE FEET) 1 STORY WOOD FRAME/ STUCCO (HEIGHT = 13'±)

BUILDING 3 — (GROUND AREA = 980 SQUARE FEET) 1 STORY WOOD FRAME/ STUCCO (HEIGHT = 14'±)

BOOK 8, PAGE 71 (M.M.)
CITY OF COSTA MESA
APN - 422-091-04

SECOR 11085 KNOTT, AVENUE, SUITE B CYPRESS, CALIFORNIA 90630 PHONE: (714)379-3366/FAX: (714)379-3375	PREPARED FOR: RED MOUNTAIN RETAIL GROUP RANDY'S AUTOMOTIVE 2089 HARBOR BOULEVARD COSTA MESA, CALIFORNIA		HYDROCARBON CONCENTRATION IN GROUNDWATER MAP	FIGURE: 5
	JOB NUMBER: 14OT.08560.01.0002	DRAWN BY: G. KAYA	CHECKED BY: B. BEESLEY / APPROVED BY: K. BROWN	DATE: MARCH 2006

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8560_1Q06(FIG.5)

TABLES

Remedial Action Plan
Red Mountain Retail Group
SW Corner of Hamilton Street and Harbor Boulevard
Costa Mesa, California
14OT.08560.01.0004
April 3, 2006

Table 1
Summary of Historical Soil Analytical Data

SW Corner of Hamilton Street and Harbor Boulevard
2089 Harbor Boulevard
Costa Mesa, California

Sample ID	Date Sampled	Sampled Depth	TPHg ppm	TPHd ppm	Benzene ppm	Toluene ppm	Ethyl Benzene ppm	Xylenes ppm	MTBE ppm	VOC'S ppm
DP1-15	01/22/00	15	ND	NA	ND	ND	ND	ND	ND	NA
DP1-20	01/22/00	20	211	NA	0.885	4.0900	5.72	20.1	ND	NA
DP1-30	01/22/00	30	ND	NA	0.013	0.0800	0.029	0.16	ND	NA
DP2-21	01/22/00	21	8.2	NA	0.242	0.5120	0.30	1.01	ND	NA
DP3-5	01/22/00	5	ND	NA	ND	0.0070	ND	ND	ND	NA
DP3-21	01/22/00	21	ND	NA	ND	ND	ND	ND	ND	NA
DP5-22	01/22/00	22	ND	NA	ND	ND	ND	ND	ND	NA
DP6-20	01/22/00	20	8.7	NA	ND	ND	0.018	ND	ND	NA
DP7-15	02/02/00	15	ND	NA	ND	ND	ND	ND	ND	NA
DP7-21	02/02/00	21	ND	NA	0.023	ND	ND	ND	ND	NA
DP7-26	02/02/00	26	ND	NA	0.025	ND	ND	ND	ND	NA
DP7-32	02/02/00	32	ND	NA	0.035	ND	ND	ND	ND	NA
DP7-40	02/02/00	40	ND	NA	ND	ND	ND	ND	ND	NA
DP8-18	02/02/00	18	ND	NA	ND	ND	ND	ND	ND	NA
DP8-20	02/02/00	20	ND	NA	ND	ND	ND	ND	ND	NA
DP9-16	02/02/00	16	ND	NA	ND	ND	ND	ND	ND	NA
DP10-15	02/02/00	15	ND	NA	ND	ND	ND	ND	ND	NA
DP10-21	02/02/00	21	ND	NA	0.010	ND	0.011	0.016	ND	NA
DP11-15	02/02/00	15	ND	NA	ND	ND	ND	ND	ND	NA
DP11-19	02/02/00	19	ND	NA	ND	ND	ND	ND	ND	NA
DP12-16	02/02/00	16	ND	NA	ND	ND	ND	ND	ND	NA
DP12-20	02/02/00	20	ND	NA	ND	ND	ND	ND	ND	NA
DP12-28	02/02/00	28	ND	NA	ND	ND	ND	ND	0.017	NA
DP13-5	04/28/00	5	ND	NA	ND	ND	ND	ND	ND	ND
DP13-10	04/28/00	10	ND	NA	ND	ND	ND	ND	ND	ND
DP13-15	04/28/00	15	ND	NA	ND	ND	ND	ND	ND	ND
DP13-18	04/28/00	18	440	NA	0.6600	0.61	3.35	14.6	ND**	8.1*
DP14-5	04/28/00	5	1.2	NA	ND	ND	ND	0.016	ND**	ND
DP14-10	04/28/00	10	ND	NA	ND	ND	ND	ND	ND	ND
DP14-16	04/28/00	16	ND	NA	ND	ND	ND	ND	ND	ND
DP15-5	04/28/00	5	ND	NA	ND	ND	ND	ND	ND	ND
DP15-10	04/28/00	10	ND	NA	ND	ND	ND	ND	ND	ND
DP15-15	04/28/00	15	ND	NA	ND	ND	ND	ND	ND	ND
DP15-20	04/28/00	20	ND	NA	ND	ND	ND	ND	ND	ND
DP15-25	04/28/00	25	ND	NA	ND	ND	ND	ND	ND	ND
DP15-30	04/28/00	30	ND	NA	ND	ND	ND	ND	ND	ND
DP15-35	04/28/00	35	ND	NA	ND	ND	ND	ND	ND**	ND
DP16-5	04/28/00	5	ND	NA	ND	ND	ND	ND	ND**	ND
DP16-11	04/28/00	11	ND	NA	ND	ND	ND	ND	ND**	ND
DP16-17	04/28/00	17	ND	NA	ND	ND	ND	ND	ND**	ND
DP16-22	04/28/00	22	668	NA	0.8920	1.62	7.4	31.14	ND**	21.6*
DP17-5	04/28/00	5	ND	NA	ND	ND	ND	ND	ND**	ND
DP17-11	04/28/00	11	ND	NA	ND	ND	ND	ND	ND**	ND
DP17-18	04/28/00	18	ND	NA	ND	ND	ND	ND	ND**	ND
1-10	08/23/00	10	ND	NA	ND	ND	ND	ND	ND	NA
1-15	08/23/00	15	ND	NA	ND	ND	ND	ND	ND	NA
1-20	08/23/00	20	ND	NA	ND	ND	ND	ND	ND	NA
2-5	08/23/00	5	ND	NA	ND	ND	ND	ND	ND	NA
2-10	08/23/00	10	ND	NA	ND	ND	ND	ND	ND	NA
2-15	08/23/00	15	ND	NA	ND	ND	ND	ND	ND	NA
2-20	08/23/00	20	ND	NA	ND	ND	ND	ND	ND	NA
3-5	08/23/00	5	ND	NA	ND	ND	ND	ND	ND	NA
3-10	08/23/00	10	ND	NA	ND	ND	ND	ND	ND	NA

Table 1
Summary of Historical Soil Analytical Data

SW Corner of Hamilton Street and Harbor Boulevard
2089 Harbor Boulevard
Costa Mesa, California

Sample ID	Date Sampled	Sampled Depth	TPHg ppm	TPHd ppm	Benzene ppm	Toluene ppm	Ethyl Benzene ppm	Xylenes ppm	MTBE ppm	VOC'S ppm
3-15	08/23/00	15	ND	NA	ND	ND	ND	ND	ND	NA
3-20	08/23/00	20	ND	NA	ND	ND	ND	ND	ND	NA
4-10	08/23/00	10	ND	ND	ND	ND	ND	ND	ND	NA
4-15	08/23/00	15	ND	ND	ND	ND	ND	ND	ND	NA
4-20	08/23/00	20	ND	ND	ND	ND	ND	ND	ND	NA
5-20	08/23/00	20	ND	68	ND	ND	ND	ND	ND	NA
5-25	08/23/00	25	ND	ND	ND	ND	ND	0.038	ND	NA
5-30	08/23/00	30	ND	ND	ND	ND	ND	0.023	ND	NA
5-35	08/23/00	35	ND	ND	ND	ND	ND	ND	ND	NA
MW9-20	08/23/00	20	ND	73	ND	ND	ND	ND	ND	NA
MW9-25	08/23/00	25	ND	ND	ND	ND	ND	ND	ND	NA

Notes

TPHg = Total petroleum hydrocarbons as gasoline (C4 - C12)
TPHd = Total petroleum hydrocarbons as diesel (C13 - C22)
MTBE = Methyl tertiary butyl ether
VOCs = Volatile organic compounds
ppm = Parts per million

ND = Not detected below the limits of detection
NA = Not Analyzed
* = Highest constituent concentration; in each instance the highest VOC was 1,2,4-Trimethylbenzene
** = Results using 8260 Method

Soil analytical data obtained from S&S's Assessment Reports dated May 30 and September 18, 2000.

Table 2
Summary of Historical Water Sample Data

SW Corner of Hamilton Street and Harbor Boulevard
2089 Harbor Boulevard
Costa Mesa, California

Sample ID	Date Sampled	LPH feet	TPHg ppm	TPHd ppm	Benzene ppm	Toluene ppm	Ethyl Benzene ppm	Xylenes ppm	MTBE ppm	VOC'S ppm
DP1	01/22/00	NM	133	-	5.46	25.9	4.83	26.5	ND	NA
DP7	02/02/00	NM	0.52	-	ND	0.0004	ND	ND	0.52	NA
DP8	02/02/00	NM	1.8	-	ND	ND	ND	ND	1.75**	NA
DP9	02/02/00	NM	9.1	-	0.14	1.2	0.35	1.83	0.035	NA
DP10	02/02/00	NM	113	-	5.26	15.6	3.0	16.1	ND	NA
DP11	02/02/00	NM	358	-	0.156	0.85	4.26	13.3	ND	NA
DP12	02/02/00	NM	0.35	-	0.0004	0.002	0.008	0.029	0.001	NA
DP13	04/28/00	NM	1.14	ND	0.69	0.23	1.91	6.56	ND	5.48
DP14	04/28/00	NM	0.475	ND	ND	ND	ND	ND	0.62**	ND
DP15	04/28/00	NM	ND	ND	ND	ND	ND	ND	ND	ND
DP16	04/28/00	NM	3.45	ND	ND	ND	0.055	0.255	0.26**	0.19
DP17	04/28/00	NM	190	ND	12.5	30.9	3.29	20.4	ND	3.0
1	08/23/00	NM	ND	ND	NT	ND	ND	ND	7.1	NA
2	08/23/00	NM	ND	ND	NT	ND	ND	ND	2.1	NA
3	08/23/00	NM	ND	ND	NT	ND	ND	ND	6.8	NA
4	08/23/00	NM	ND	ND	ND	ND	ND	ND	ND	NA
5	08/23/00	NM	ND	ND	ND	ND	ND	ND	6.2	NA
6	08/23/00	NM	ND	ND	ND	ND	ND	ND	ND	NA
7	08/23/00	NM	ND	ND	NT	ND	ND	ND	ND	NA
MW1	09/05/00	NM	1.63	NT	ND	ND	ND	ND	1.63	NA
	03/29/01	NM	2.35	NT	ND	ND	ND	ND	1.52	NA
	08/20/01	NM	2.37	NT	ND	ND	ND	ND	2	NA
	02/15/02	NM	4.02	NT	ND	ND	ND	ND	3.21	NA
	06/03/02	NM	8.77	ND	ND	ND	ND	ND	6.77	NA
	10/02/02	NM	0.308	ND	ND	ND	ND	ND	0.285	NA
	04/18/03	NM	5.07	0.784	ND	ND	ND	ND	4.69	NA
	10/26/04	NM	2.57	ND	ND	ND	ND	ND	0.965	NA
MW2	09/01/00	1.77	NS	NS	NS	NS	NS	NS	NS	NS
	03/29/01	Unknown	NS	NS	NS	NS	NS	NS	NS	NS
	08/20/01	1.63	NS	NS	NS	NS	NS	NS	NS	NS
	02/15/02	1.91	NS	NS	NS	NS	NS	NS	NS	NS
	06/03/02	1.77	NS	NS	NS	NS	NS	NS	NS	NS
	10/02/02	1.72	NS	NS	NS	NS	NS	NS	NS	NS
	04/18/03	1.63	84.6	189	15.9	29	3.27	20.2	2.55	NA
	10/26/04	1.87	36.6	21.8	7.18	9.95	2.22	8.22	ND	NA
MW3	09/05/00	NM	1.88	NT	ND	ND	0.048	0.0942	ND	NA
	03/29/01	NM	0.332	NT	ND	0.0006	0.0103	0.0089	0.0031	NA
	08/20/01	NM	1.45	NT	ND	ND	0.0173	0.0027	0.0038	NA
	02/15/02	NM	0.087	NT	ND	ND	ND	ND	0.0032	NA
	06/03/02	NM	0.223	ND	ND	ND	0.0024	ND	0.0065	NA
	10/02/02	NM	ND	ND	ND	ND	ND	ND	0.0064	NA
	04/18/03	NM	0.101	ND	ND	ND	ND	ND	0.0133	NA
	10/26/04	NM	0.112	ND	ND	ND	ND	ND	0.0092	NA

Table 2
Summary of Historical Water Sample Data

SW Corner of Hamilton Street and Harbor Boulevard
2089 Harbor Boulevard
Costa Mesa, California

Sample ID	Date Sampled	LPH feet	TPHg ppm	TPHd ppm	Benzene ppm	Toluene ppm	Ethyl Benzene ppm	Xylenes ppm	MTBE ppm	VOC'S ppm
MW4	03/29/01	Unknown	NS	NS	NS	NS	NS	NS	NS	NS
	08/20/01	1.19	NS	NS	NS	NS	NS	NS	NS	NS
	02/15/02	1.23	NS	NS	NS	NS	NS	NS	NS	NS
	06/03/02	1.26	NS	NS	NS	NS	NS	NS	NS	NS
	10/02/02	1.16	NS	NS	NS	NS	NS	NS	NS	NS
	04/18/03	1.2	3.14	778	0.509	ND	ND	0.0458	0.0459	NA
	10/26/04	1.61	4.69	257	0.375	ND	0.237	0.366	0.0617	NA
MW5	03/29/01	NM	12.4	NT	0.575	1.42	0.799	4.33	0.038	NA
	08/20/01	NM	9.73	NT	0.259	0.492	0.552	2.51	0.0345	NA
	02/15/02	0.99	NS	NS	NS	NS	NS	NS	NS	NS
	06/03/02	1.05	26.2	139	NA	NA	NA	NA	NA	NA
	10/02/02	1.01	NS	NS	NS	NS	NS	NS	NS	NS
	04/18/03	0.77	12.4	230	0.323	0.464	0.443	3.82	0.065	NA
	10/26/04	0.83	50.7	98.4	0.056	ND	1.82	6.91	ND	NA
MW6	03/29/01	Unknown	NS	NS	NS	NS	NS	NS	NS	NS
	08/20/01	Unknown	NS	NS	NS	NS	NS	NS	NS	NS
	02/15/02	1.11	NS	NS	NS	NS	NS	NS	NS	NS
	06/03/02	1.53	NS	NS	NS	NS	NS	NS	NS	NS
	10/02/02	1.32	NS	NS	NS	NS	NS	NS	NS	NS
	04/18/03	1.47	19.3	124	0.890	3.71	1.51	5.50	ND	NA
	10/26/04	1.82	108	25.5	0.272	3.1	2.46	13.9	ND	NA
MW7	03/29/01	NM	0.795	NT	ND	0.0015	0.0016	0.013	0.684	NA
	08/20/01	NM	1.36	NT	ND	ND	ND	0.0025	0.825	NA
	02/15/02	NM	1.07	NT	ND	ND	ND	ND	0.89	NA
	06/03/02	NM	1.63	ND	ND	ND	ND	ND	0.959	NA
	10/02/02	NM	1.11	ND	ND	ND	ND	ND	0.965	NA
	04/18/03	NM	1.55	ND	ND	ND	ND	ND	1.54	NA
	10/26/04	NM	1.6	ND	ND	ND	ND	ND	1.59	NA
MW8	04/18/03	NM	ND	ND	ND	ND	ND	ND	0.0179	NA
	10/26/04	NM	ND	ND	ND	ND	ND	ND	0.0241	NA
MW9	04/18/03	NM	0.287	0.937	ND	0.0023	7.7	0.0069	0.135	NA
	10/26/04	NM	0.14	ND	ND	ND	ND	ND	0.134	NA

Notes

TPHg = Total petroleum hydrocarbons as gasoline (C4 - C12)
TPHd = Total petroleum hydrocarbons as diesel (C13 - C22)
MTBE = Methyl tertiary butyl ether
VOCs = Volatile organic compounds
ND = Not detected below the limits of detection
LPH = Liquid phase hydrocarbons
Unknown = Data missing from S&S reports, but other wells were sampled and data is presented.

NA = Not analyzed
NM = LPH not measured in well
** = Results using 8015M Method
NS = Not Sampled

Table 3
Summary of Soil Sample Data

SW Corner of Hamilton Street and Harbor Boulevard
Randy's Automotive Facility
2089 Harbor Boulevard
Costa Mesa, California

Sample ID	Date Sampled	Sampled Depth	TPHg* µg/kg	TPHd** mg/kg	TPHo** mg/kg	Benzene* µg/kg	Toluene* µg/kg	Ethyl Benzene* µg/kg	Xylenes* µg/kg	MTBE* µg/kg	TBA* µg/kg	VOCs* µg/kg
B-1-5	02/28/06	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-1-10	02/28/06	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-1-15	02/28/06	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-1-20	02/28/06	20	**1780**	ND	ND	**99**	**298**	**48**	**324**	ND	ND	Naphthalene-25, 1,2,4-TMB-44
B-1-25	02/28/06	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-2-5	02/28/06	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-2-10	02/28/06	10	**504**	ND	ND	**7**	ND	ND	ND	ND	ND	ND
B-2-15	02/28/06	15	ND	ND	ND	**2**	ND	ND	ND	ND	ND	ND
B-2-20	02/28/06	20	**1790**	ND	ND	**9**	ND	**8**	**26**	ND	ND	Acetone-77, Naphthalene-30, 1,2,4-TMB-37
B-2-25	02/28/06	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-3-5	02/28/06	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-3-10	02/28/06	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-3-15	02/28/06	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-3-20	02/28/06	20	**1250000**	**924**	ND	**540**	**220**	**13900**	**15615**	ND	ND	n-Butylbenzene-8850, sec-butylbenzene-8850, Isopropylbenzene-2170, p-Isopropyltoluene-800, Naphthalene-51000, n-Propylbenzene-7950, 1,2,4-TMB-46300, 1,3,5-TMB-7100,
B-3-25	02/28/06	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-4-5	02/28/06	5	ND	ND	ND	**9**	ND	ND	ND	ND	ND	ND
B-4-10	02/28/06	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-4-15	02/28/06	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-4-20	02/28/06	20	**747**	**640**	ND	**1060**	**7940**	**9640**	**50400**	ND	ND	sec-Butylbenzene-1480, Isopropylbenzene-1810, Naphthalene-8640, n-Propylbenzene-6360, 1,2,4-TMB-22800, 1,3,5-TMB-5340
B-4-25	02/28/06	25	**568**	ND	ND	**38**	**7**	**20**	**136**	ND	ND	Naphthalene-16, 1,2,4-TMB-20
B-5-5	02/28/06	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-5-10	02/28/06	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-5-15	02/28/06	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 3
Summary of Soil Sample Data

SW Corner of Hamilton Street and Harbor Boulevard
Randy's Automotive Facility
2089 Harbor Boulevard
Costa Mesa, California

Sample ID	Date Sampled	Sampled Depth	TPHg* µg/kg	TPHd** mg/kg	TPHo** mg/kg	Benzene* µg/kg	Toluene* µg/kg	Ethyl Benzene* µg/kg	Xylenes* µg/kg	MTBE* µg/kg	TBA* µg/kg	VOCs* µg/kg
B-5-20	02/28/06	20	**2260**	**43**	ND	**2**	**3**	**18**	ND	ND	ND	n-Butylbenzene-13, Naphthalene-77, n-Propylbenzene-17
B-5-25	02/28/06	25	ND	ND	ND	ND	ND	ND	**6**	ND	ND	1,2,4-TMB
B-6-5	03/01/06	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-6-10	03/01/06	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-6-15	03/01/06	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-6-20	03/01/06	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-6-25	03/01/06	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-7-5	03/01/06	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-7-10	03/01/06	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-7-15	03/01/06	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-7-20	03/01/06	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-7-25	03/01/06	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-8-5	03/01/06	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-8-10	03/01/06	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-8-15	03/01/06	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-8-20	03/01/06	20	ND	ND	ND	**47**	ND	**16**	ND	ND	ND	Naphthalene - 19
B-8-25	03/01/06	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-9-5	03/01/06	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-9-10	03/01/06	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-9-15	03/01/06	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-9-20	03/01/06	20	ND	ND	ND	**69**	ND	**10**	**7**	ND	ND	Naphthalene - 24, 1,2,4-TMB - 39
B-9-25	03/01/06	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-10-5	03/01/06	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-10-10	03/01/06	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-10-15	03/01/06	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-10-20	03/01/06	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	Acetone - 100
B-10-25	03/01/06	25	ND	ND	ND	ND	ND	ND	ND	**11**	ND	ND
B-11-5	03/02/06	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-11-10	03/02/06	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-11-15	03/02/06	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-11-20	03/02/06	20	ND	ND	ND	ND	ND	ND	ND	**7**	ND	ND
B-11-25	03/02/06	25	ND	ND	ND	ND	ND	ND	ND	**24**	**284**	ND

Table 3
Summary of Soil Sample Data

SW Corner of Hamilton Street and Harbor Boulevard
Randy's Automotive Facility
2089 Harbor Boulevard
Costa Mesa, California

Sample ID	Date Sampled	Sampled Depth	TPHg* µg/kg	TPHd** mg/kg	TPHo** mg/kg	Benzene* µg/kg	Toluene* µg/kg	Ethyl Benzene* µg/kg	Xylenes* µg/kg	MTBE* µg/kg	TBA* µg/kg	VOCs* µg/kg
B-12-5	03/02/06	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-12-10	03/02/06	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-12-15	03/02/06	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-12-20	03/02/06	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-12-25	03/02/06	25	ND	ND	ND	ND	**5**	**3**	**19**	**13**	ND	ND

Notes
TPHg = Total petroleum hydrocarbons as gasoline (C4 - C12)
TPHd = Total petroleum hydrocarbons as diesel (C13 - C22)
TPHo = Total petroleum hydrocarb(
MTBE = Methyl tertiary butyl ether
TBA = Tertiary butyl alcohol
VOCs = Volatile organic compounds
TMB = Trimethylbenzene
µg/Kg = Micrograms per liter or Parts per billion (ppb)
mg/Kg = Milligrams per liter or Parts per million (ppm)

ND = Not detected below the limits of detection
* = Results using 8260B Method
** = Results using 8015M Method

Table 4
Summary of Hydropunch Groundwater Sample Data

SW Corner of Hamilton Street and Harbor Boulevard
Randy's Automotive Facility
2089 Harbor Boulevard
Costa Mesa, California

Sample ID	Date Sampled	TPHg* µg/L	TPHd** mg/L	TPHo** mg/L	Benzene* µg/L	Toluene* µg/L	Ethyl Benzene* µg/L	Xylenes* µg/L	MTBE* µg/L	TBA* µg/L	VOCs* µg/L
B-1	02/28/06	**1070000**	**4.1**	ND	**3600**	**45400**	**18000**	**134400**	ND	ND	Isopropylbenzene - 2320, Naphthalene - 3720, n-Propylbenzene - 8000, 1,2,4-TMB - 32600, 1,3,5-TMB - 9240
B-2	02/28/06	**185000**	**198**	ND	**1570**	**12600**	**3660**	**26200**	ND	ND	Isopropylbenzene - 400, Naphthalene - 754, n-Propylbenzene - 1250, 1,2,4-TMB - 5220, 1,3,5-TMB - 1550
B-3	02/28/06	**9790**	**2.2**	ND	**171**	**16**	**315**	**597**	ND	ND	sec-butylbenzene - 20, Isopropylbenzene - 77, Naphthalene - 137, n-Propylbenzene - 201, 1,2,4-TMB - 670, 1,3,5-TMB - 134
B-4	02/28/06	**33000**	**1.7**	ND	**4330**	**425**	**820**	**3840**	ND	ND	Isopropylbenzene - 82, Naphthalene - 363, n-Propylbenzene - 250, 1,2,4-TMB - 990, 1,3,5-TMB - 285
B-5	02/28/06	**11900**	**1.3**	ND	**39**	**ND**	**352**	**1366**	ND	ND	sec-butylbenzene - 20, Isopropylbenzene - 47, Naphthalene - 110, n-Propylbenzene - 140, 1,2,4-TMB - 157, 1,3,5-TMB - 544
B-6	03/01/06	**3380**	ND	ND	**150**	**37**	**116**	**597**	**344**	**73**	Isopropylbenzene-13, Naphthalene-22, n-Propylbnezene-20, 1,2,4-TMB-110, 1,2,3-TMB-28

Table 4
Summary of Hydropunch Groundwater Sample Data

SW Corner of Hamilton Street and Harbor Boulevard
Randy's Automotive Facility
2089 Harbor Boulevard
Costa Mesa, California

Sample ID	Date Sampled	TPHg* µg/L	TPHd** mg/L	TPHo** mg/L	Benzene* µg/L	Toluene* µg/L	Ethyl Benzene* µg/L	Xylenes* µg/L	MTBE* µg/L	TBA* µg/L	VOCs* µg/L
B-7	03/01/06	**419**	ND	ND	ND	ND	ND	ND	**106**	**236**	ND
B-8	03/01/06	**6760**	ND	ND	**2420**	**20**	**362**	ND	ND	ND	Isopropylbenzene-22
B-9	03/01/06	**39200**	**2.7**	ND	**750**	**106**	**1290**	**6750**	ND	ND	Isopropylbenzene-125, Naphthalene-275, n-Propylbenzene-376, 1,2,4-TMB-1570, 1,3.5-TMB-440
B-10	03/01/06	**224000**	**542**	ND	**3200**	ND	**3660**	**12159**	ND	ND	sec-Butylbenzene-376, Isopropylbenzene-530, Naphthalene-2160, n-Propylbenzene-1660, 1,2,4-TMB-7100, 1,3,5-TMB-2080
B-11	03/02/06	**1230**	ND	ND	ND	ND	ND	ND	**707**	**139**	ND
B-12	03/02/06	**366000**	**46.9**	ND	**1370**	**19600**	**7550**	**52300**	ND	ND	Isopropylbenzene-765, Naphthalene-1480, n-Propylbenzene-2650, 1,2,4-TMB-9870, 1,3,5-TMB-2810

Notes

TPHg = Total petroleum hydrocarbons as gasoline (C4 - C12)
TPHd = Total petroleum hydrocarbons as diesel (C13 - C22)
TPHo = Total petroleum hydrocarbons as oil (C22+)
MTBE = Methyl tertiary butyl ether
TBA = Tertiary butyl alcohol
VOCs = Volatile organic compounds
µg/L = Micrograms per liter or Parts per billion
mg/L = Milligrams per liter or Parts per million
TMB = Trimethylbenzene

ND = Not detected below the limits of detection
* = Results using 8260B Method
** = Results using 8015M Method

Table 5
Summary of Groundwater Monitoring Well Sample Data

SW Corner of Hamilton Street and Harbor Boulevard
2089 Harbor Boulevard
Costa Mesa, California

Sample ID	Date Sampled	TOC Elevation (ft amsl)	Depth to Groundwater (feet)	Product Thickness (feet)	Groundwater Elevation (ft amsl)	TPHg* µg/L	TPHd** mg/L	TPHo** mg/L	Benzene* µg/L	Toluene* µg/L	Ethyl Benzene* µg/L	Xylenes* µg/L	MTBE* µg/L	DIPE* µg/L	ETBE* µg/L	TAME* µg/L	TBA* µg/L
MW-1	03/02/06	80.58	19.58	--	61.00	ND	ND	ND	ND	ND	ND	ND	**19.8**	ND	ND	ND	ND
	03/16/06	80.58	18.61	--	61.97	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	03/02/06	81.41	20.59	1.29	61.79	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/16/06	81.41	20.61	1.27	61.75	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	03/02/06	81.16	19.05	--	62.11	**436**	**0.6**	ND	ND	ND	**8.1**	**17.1**	**5.5**	ND	ND	ND	ND
	03/16/06	81.16	19.03	--	62.13	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	03/02/06	81.19	19.93	0.81	61.87	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/16/06	81.19	19.94	0.81	61.86	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	03/02/06	81.69	19.50	0.22	62.36	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/16/06	81.69	19.79	0.26	62.10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	03/02/06	81.10	19.19	0.04	61.94	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/16/06	81.10	19.23	0.04	61.90	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-7	03/02/06	80.93	18.94	--	61.99	**994**	**0.9**	ND	ND	ND	ND	ND	**934**	ND	ND	ND	ND
	03/16/06	80.93	18.90	--	62.03	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-8	03/02/06	80.63	18.94	--	61.69	ND	ND	ND	ND	ND	ND	ND	**18.6**	ND	ND	ND	ND
	03/16/06	80.63	18.92	--	61.71	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-9	03/02/06	83.60	21.11	--	62.49	**166**	**1.4**	ND	ND	ND	ND	ND	**141**	ND	ND	ND	ND
	03/16/06	83.60	21.08	--	62.52	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trip Blank	03/02/06	--	--	--	--	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes
TPHg = Total petroleum hydrocarbons as gasoline (C4 - C12)
TPHd = Total petroleum hydrocarbons as diesel (C13 - C22)
TPHo = Total petroleum hydrocarbons as oil (C22+)
MTBE = Methyl tertiary butyl ether
DIPE = Diisopropyl ether
ETBE = Ethyl tertiary butyl ether
TAME = Tertiary amyl methyl ether
TBA = Tertiary butyl alcohol
µg/L = Micrograms per liter

ND = Not detected below the limits of detection
NS = Not sampled
NA = Not analysed
* = Results using 8260B Method
** = Results using 8015M Method
amsl - above mean sea level
TOC Top of Casing elevation obtained from S&S November 17, 2004 report

TABLE 6A

FEASIBILITY MATRIX FOR SOIL
CHOW PROPERTY
SW CORNER HAMILTON STREET AND HARBOR BOULEVARD
COSTA MESA, CALIFORNIA

Remedial Action	Regulatory Acceptance	Permitting	Initiation Time	Effectiveness	Conclusion
1) Natural Attenuation	Slightly Favorable	None necessary	Immediate	Effective for low concentrations	Considered as a second phase methodology.
2) Soil Vapor Extraction	Favorable	Easily permitted	3 months for design, permitting, and construction	Effective soil remediation	Considered due to installation time and applicability for high free product removal rates.
3) Excavation	Favorable	Easily permitted	Not feasible	Effective	Eliminated: Cost, depth.

TABLE 6B

FEASIBILITY MATRIX FOR GROUNDWATER
CHOW PROPERTY
SW CORNER HAMILTON STREET AND HARBOR BOULEVARD
COSTA MESA, CALIFORNIA

Remedial Action	Regulatory Acceptance	Permitting	Initiation Time	Effectiveness	Conclusion
1) Natural Attenuation	Slightly Favorable	None necessary	Immediate	Not applicable	Considered as a second phase methodology.
2) Pump and Treat	Favorable	Easily permitted - Requires a discharge permit	6-9 months for design, permitting, and construction	Effective for plume control, but not very effective for groundwater treatment	Eliminated: cost and lack of effectiveness in a timely fashion.
3) Air Sparging	Favorable	Easily permitted	3 months for design, permitting, and construction	Effectiveness depends upon soil types and depth of contamination	Eliminated: presence of LNAPL.
4) LNAPL Removal	Favorable	Easily permitted	3 months for design, permitting, and construction	Effectiveness depends upon soil types and depth of contamination	Considered

APPENDIX A
STANDARD OPERATING PROCEDURES

Remedial Action Plan
Red Mountain Retail Group
SW Corner of Hamilton Street and Harbor Boulevard
Costa Mesa, California
14OT.08560.01.0004
April 3, 2006

STANDARD PROCEDURE FOR DIRECT PUSH DRILLING

Prior to drilling, all boring locations are marked with white paint or other discernible marking and cleared for underground utilities through Underground Service Alert (USA). In addition, a subsurface geophysical utility survey is completed to locate any subsurface obstructions not identified through USA. The first five feet of each borehole are then cleared with a hand auger or posthole digger to clear the borehole location for underground utilities.

Once pre-drilling efforts to identify subsurface structures are complete, pre-cleaned push rods (typically one to two inches in diameter) are advanced using a hydraulic push type rig for the purpose of collecting samples and evaluating subsurface conditions. Upon reaching the designated sampling point, the pointed push tip is retracted to expose the sampler lined with pre-cleaned brass, or stainless steel sample tubes. The sampler is pushed, or driven using a hydraulic hammer, into underlying soil approximately 18 inches to fill the acetate sample tubes. Once the sample is collected, the rods and sampler are retracted and the sample tubes are removed from the sampler head. The sampler head is then cleaned, filled with clean sample tubes, inserted into the borehole and advanced to the next sampling point where the sample collection process is repeated.

Upon completion of drilling and sampling the rods are retracted and the resulting borehole is filled with concrete, bentonite grout, hydrated bentonite chips or pellets as required by the regulatory agency. In areas where the borehole penetrates asphalt or concrete, the borehole is capped with an equivalent thickness of asphalt or concrete patch to match finish grade.

During the sampling process a physical description of observed soil characteristics (i.e. moisture content, consistency, odor, color, etc.), drilling difficulty and soil type as a function of depth are described on boring logs in accordance with the Unified Soil Classification System (USCS).

No soil cuttings are generated during drilling as the underlying soils are displaced by the push rods. However, hand auger cuttings generated in the upper four feet during the initial utility clearance may be compacted in the upper portion of the hole immediately under the asphalt cap.

STANDARD PROCEDURE FOR EQUIPMENT DECONTAMINATION

All equipment that could potentially contact subsurface media and compromise the integrity of the samples is carefully decontaminated prior to drilling and sampling. Drill augers and other large pieces of equipment are decontaminated using high pressure hot water spray. Samplers, groundwater pumps, liners and other equipment are decontaminated in an Alconox scrub solution and double rinsed in clean tap water rinse followed by a final distilled water rinse.

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

STANDARD PROCEDURES FOR GROUNDWATER SAMPLING PETROLEUM HYDROCARBONS

Groundwater sampling activities involve several activities including groundwater and free product depth measurements, well purging, sample collection, waste water disposal, etc. The procedures for conducting these activities are described below.

DEPTH TO GROUNDWATER/LNAPL THICKNESS MEASUREMENTS

Prior to purging each of the wells, the depth to groundwater and thickness of liquid phase hydrocarbons (LNAPL) (if present) within each well casing is measured to the nearest 0.01 foot using either an electronic Solinst water level indicator or an electronic oil-water interface probe. Measurements are taken from a point of known elevation on the top of each well casing as determined in accordance with previous surveys.

LNAPL RECOVERY

LNAPL encountered within monitoring wells is removed as required by the regulatory agency by either: 1) skimming LNAPL from the groundwater surface using a dedicated 1-inch diameter polyvinyl chloride (PVC) "stinger" attached to a vacuum truck or 2) hand bailing using a PVC bailer.

GROUNDWATER MONITORING WELL PURGING

Groundwater wells may or may not be purged depending on the requirements of the project. Where purging is conducted prior to sampling wells that do not contain LNAPL, a dedicated 1-inch diameter PVC "stinger," bailer or groundwater pump may be used to purge the wells. Purge water may be discharged directly to a vacuum truck via the “stinger” or contained on-site in 55-gallon DOT-approved drums. To assure that the collected samples were representative of fresh formation water, the conductivity, temperature, and pH of the delivered effluent are monitored and recorded using a Cambridge Hydac meter during purge operations. In addition, the turbidity of the removed water is visually monitored and recorded. Purge operations are determined to be sufficient once successive measurements of pH, conductivity, and temperature stabilize to within +/- 10 percent.

During purging a minimum of three (3) well volumes, measured as the annular space of the well casing below the groundwater surface, are removed from each well. However, in the case of very slow recharging wells, purging is deemed sufficient if the well contents are completely evacuated during purge operations. Unless recharge takes more than a couple of hours, wells are sampled once the well is recharged to within in 90 percent of pre-purge groundwater elevation. For very slow recharging wells (wells pumped dry during purging), samples may be collected after 2 hours of recharge.

GROUNDWATER SAMPLE ACQUISITION AND HANDLING

Following purging operations, groundwater samples are collected from each of the wells at the air-water interface, using precleaned, single-sample polypropylene, disposable bailers. The groundwater sample is discharged from the bailer to the sample container through a bottom emptying flow control valve to minimize volatilization.

Collected water samples are discharged directly into laboratory provided, precleaned, 40 milliliter (ml) glass vials or one liter amber bottles and sealed with Teflon-lined septum, screw-on lids. Labels documenting sample number, well identification, collection date and time, type of sample and type of preservative (if applicable) are affixed to each sample. The samples are then placed into an ice-filled cooler for delivery under chain-of-custody to a laboratory certified to perform the specified tests by the State of California Department of Health Services Environmental Laboratory Accreditation Program.

TRIP BLANKS

To assure the quality of the collected samples and to evaluate the potential for cross contamination during transport to the laboratory, a distilled-water trip blank accompanies the samples in the cooler. The trip blank is analyzed for the presence of volatile organic compounds of concern. For petroleum hydrocarbons the trip blank is typically analyzed for aromatic volatile organics and methyl tert butyl ether (MTBE) by EPA Test Method 8020.

CONTAINMENT AND DISPOSAL OF GENERATED WATER/LNAPL

All wastewater, purge water and LNAPL (if present) generated during the field activities are retained on-site in appropriate containers (i.e. DOT approved drums or bulk tanks) for future disposal. All wastewater is delivered under appropriate manifest to a facility certified and licensed to receive such waste streams.

Related Procedures:

- *Standard Procedure for Equipment Decontamination*