Applied Remedial Technologies
Environmental | Radiological | Geotechnical | Construction Services

March 12, 2007

Mr. Jerry Wickham
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6577

jerry.wickham@acgov.org

RE: Proposed WORK PLAN TO CONDUCT FIELD OVERSIGHT AND CONFIRMATION SOIL SAMPLING FOR THE EXCAVATION OF SOILS AT THE FORMER DIESEL UST DISPENSER ISLAND, BELOW THE FORMER STORAGE TANKS, AND AT THE RECENT DIESEL SPILL AREAS
461 MCGRAW AVENUE, LIVERMORE, CALIFORNIA 94550

Dear Mr. Wickham:

Applied Remedial Technologies, Inc (ART) is pleased to submit this proposed workplan to address the following environmental concerns:

- Removal of the concrete diesel pump island, piping, and associated impacted soils below the remaining piping as the remaining part of the former underground storage tank closure activities. This activity will include the excavation of soils and the collection of soil confirmation samples in the excavation and one groundwater samples from the nearby groundwater well.
- There are three storage tanks at the site. Once the storage tanks have been properly removed offsite (activities described in separate workplan), conduct excavation of impacted soil below the three storage tanks. Confirmation soil samples will be collected below the former storage tank locations.
- Excavate the recent diesel spill impacted soils which were generated during the demolition activities conducted by Golden State Metals. Field observations will document the completeness of this work.

The purpose of this workplan is to complete the closure requirements of the former diesel underground storage tank (UST), which has been previously removed from the site, by removing the adjacent dispenser islands, associated piping, and petroleum impacted soils. Additionally, this workplan will address the recent diesel spill concerns, and soil which has been impacted below the three former storage tanks at the site which are separate and unrelated to the former UST.

Macoy Resource Corporation (Macoy) will provide field services for the removal and proper disposal of the cement pad, dispenser piping, and any petroleum impacted soils. ART will provide field direction, oversight, confirmation sampling, and report of findings to be submitted to the agency including the data from the previous investigation collected during the removal of the UST in 1995 as part of the requirements for UST closure.

BACKGROUND

According to information gathered during the preparation of this workplan, the under ground storage tank (UST) was removed from the site in 1995. Upon removal of the UST, the tank appeared to be in good condition with no visible holes. The field observations combined with the soil sample analytical results (S-1 through S-3) reported that no petroleum hydrocarbons were detected.

However, a soil sample collected from below the dispenser island (S-4) was found to contain 17,000 parts per million (ppm) total petroleum hydrocarbons as diesel (TPH-d). This sample was collected from an area of obvious over-spillage. No benzene, toluene, ethyl benzene or xylenes (collectively BTEX) were detected.

A water sample collected from the base of the excavation did not contain any detectable concentrations of the constituents analyzed. The approximate depth of water at the base of the excavation was between 13 to 14 feet below ground surface (bgs).

According to information gathered during the development of this workplan, there are three ASTs located at the site and a location where one of the tanks was formerly located that may require testing; also, 34 small areas where oil straining has been observed from the recent demolition activities, and 7 larger areas where unauthorized releases of diesel fuel had been observed by agency personnel during Golden State Metal's dismantling and removal of the former tanks at the site. Soil samples previously collected by the Department of Toxic Substances Control (DTSC) from below the ASTs have shown the presence of petroleum hydrocarbons from the ASTs in the soil directly below the tanks.

The following letters/communications have been produced in response to the environmental issues at the site:

- December 27, 1995 Letter from the Alameda County Health Care Services Agency regarding the Workplan Approval for 461 McGraw Avenue, Livermore, California 94550

  Ms. Eva Chu, Hazardous Materials Specialist with the ACHCSA completed a review of Risk Management's December 21, 1995 Workplan. Ms. Chu stated that the workplan was acceptable and that the work should commence within 45 days. Verification soil samples should be analyzed for total petroleum hydrocarbons as diesel, and the sample with the highest diesel concentration should be analyzed for polynuclear aromatic compounds.

- July 29, 1996 Letter from the Alameda County Health Care Services Agency regarding the overexcavation at 461 McGraw Avenue, Livermore, California 94550

  This letter addressed to Mr. Crandal Mackey with Cal Mac Transportation stated that although on December 27, 1995 a workplan had been approved for the overexcavation of the diesel impacted soil; no response had yet been received indicating that the work had been completed.

- May 14, 1997 Letter from the Alameda County Heath Care Services Agency regarding the Second Notice of Violation.

This letter was addressed to Mr. Crandal Mackey with Cal Mac Transportation as a second notice of violation stating that on July 29, 1996, the ACHCSA sent a letter approving the workplan to over excavate diesel impacted soil under the former diesel dispenser at the property.

Diesel impacted soils were identified beneath the dispenser island during the removal of a 12,000 gallon diesel UST was removed in 1995. During the UST removal and confirmation soil and groundwater sampling below the UST, no diesel was reported in either the soil sample or groundwater sample collected. A soil sample collected at a depth of 2 feet below ground surface beneath the diesel dispenser contained total petroleum hydrocarbons as diesel (TPH-d) at 17,000 parts per million (ppm).

Site Information

The site is located north east of the intersection of McGraw Avenue and Preston Road in Livermore, Alameda County, California. The nearest surface water is Arroyo Seco located approximately ½ mile south of the site. The Arroyo Seco flows to the northwest, and groundwater is anticipated to occur at depths of 10 to 15 feet below ground surface. Figure 1 depicts the site location, and Figure 2 depicts the site layout and features of concern.

At the present time the site is vacant, but was formerly used by Cal Mac Transportation Agency as a trucking business.

SCOPE OF WORK

Prior to the excavation of soils below the storage tanks, Macoy will properly decommission the storage tanks by removing the contents and tanks for disposal/recycling at an approved off site facility (described under a separate workplan). The impacted soil will be excavated and stockpiled pending analytical results for off site disposal at an approved offsite facility as described by this workplan.

Macoy will be performing the excavation using a backhoe with the oversight of ART to provide the engineering/geological services required as part of the contaminant delineation and confirmation soil sampling. Soil from the excavation will be stockpiled and covered with Visqueen plastic pending offsite removal. The excavated soils will be transported for offsite disposal at Waste Management's Altamont Landfill in Livermore, California.

A report summarizing this work will be presented to the agency which will include a description of the field work, manifests, and a summary of analytical data, and figures depicting sample collection locations. The report will be submitted to the appropriate regulatory agencies as part of the UST closure requirements.

TASK 1 – Pre-Field Activities

ART will conduct pre-field activities for the proposed excavation and sampling activities. These activities will include development of a Health and Safety Plan (HASP) which includes a brief scope of work, and a site visit to coordinate on-site access for drilling and sampling purposes. ART will contact the public utility location service (Underground Service Alert) at least 48 hours prior to the initiation of field work, and will contract with a private utility location service to clear the proposed

excavation areas of subsurface obstructions at the Site.

Additionally, ART will coordinate all workplan approvals and field inspections with the Alameda County Environmental Health Department and Livermore Pleasanton Fire Department, as necessary, prior to initiating the field investigation.

TASK 2 – Field Work

At this time, it is anticipated that the following estimated volumes of soil will require removal to properly address the remaining items of concern:

- Up to 72 yards of soil may require excavation and disposal to an off site facility for the impacted soils below the former diesel pump island and fuel piping.
- Up to 31 yards of soil at the seven larger recent diesel release areas.
- Up to 11 yards of soil at 34 small recent diesel/motor oil stained areas.
- Up to 30 yards below Tank T-1.
- Up to 16 yards below Tank T-2.
- Up to 34 yards below Tank T-3.
- Up to 45 yards below former Tank T-1 location.

These above mentioned volume estimates are estimates of the maximum extent of soil which may have been impacted by the former features. The actual volumes of soil will be based on field observations and the analytical results of confirmation soil samples to document the completeness of the soil excavation.

Areas of Concern

There are three areas of concern that this proposed workplan addresses for the removal of impacted soils. The area as follows: the diesel pump island, the recent diesel/motor oil spill and stained areas, and the former AST locations. The following sections describe the extent of proposed excavation areas and confirmation sampling procedures.

Diesel Pump Island

To address the above-mentioned issues, ART proposes to coordinate with Macoy who will conduct the cement pad, piping and soil removal. For this work Macoy proposes to remove and dispose of the concrete pad which is approximately 800 square feet in size. The concrete will be broken up and sent off for disposal/recycling once it has been properly profiled. Remaining piping and dispenser island equipment will be removed and disposed of at an approved offsite disposal/recycling facility.

The size of the excavation will depend on the extent of the petroleum impacted soils. Based on our experience and the informational data collected for this proposal, the approximate dimensions of the excavation may be up to 15 feet long by 10 feet wide by up to 8 to 12 feet deep. It is not anticipated groundwater will be encountered during this work. The excavation will be backfilled with clean import base rock and compacted to at least 90% relative maximum density to near original

grade. This will be attempted by using a crushed rock fill (or similar) applied and compacted in lifts from the base of the excavation to surface.

Recent Diesel/Motor Oil Spill and Stained Areas

To address the 7 larger and 34 smaller recent diesel/motor oil spill and stained areas near the central and western portions of the site which were generated during the demolition activities, Macoy will excavate these areas to depths of approximately 2 feet deep. The lateral extent of the larger areas is anticipated to be 6 feet by 10 feet and smaller areas is approximately 2 feet by 2 feet in size.

Field observations including visual, hand-held Photo-ionization detector (PID) readings and olfactory observations will document the removal of the diesel impacted soils. At this time, no samples will be collected for laboratory submittal in these areas. Figure 2 depicts the locations of the recent surface spills at the site. See Confirmation Sampling section below for further discussion.

Storage Tank Areas

There are three storage tanks at the site as noted above. One of the tanks has been reportedly moved from a previous location near the east end of the site as noted on Figure 2. Macoy will excavate soils which may have been impacted from the storage of these tanks. At this time the depth of the excavations below the tanks and the former tank location is approximately 3 feet below ground surface. The lateral extent in feet of the tank excavations area as follows: T-1 (8x34), T-2 (10x15), T-3 (11x28), and the former tank location (12x34).

ART will collect confirmation soil samples at the base of the excavation for laboratory submittal to document that the petroleum impacted soils have been properly removed. See Confirmation Sampling section below for further discussion.

Confirmation Sampling

ART will collect samples per the San Francisco Regional Water Quality Control Board recommended minimum soil sampling requirements for UST tank leaks at the former pump island and the storage tank location areas. It should be noted that there is a groundwater well located on the Subject Property that is not associated with this UST. At the request of Mr. Jerry Wickham, one groundwater sample will be collected from the well and evaluated for petroleum hydrocarbons.

A drive sampler lined with new brass liners or liners cleaned with a trisodium phosphate (TSP) solution, double rinsed with clean tap water, and air dried will be used. The drive sampler will also cleaned with TSP and rinsed with distilled water between sampling events.

Soil samples selected for laboratory analysis are left in the brass liners, sealed with Teflon tape and end plastic caps, labeled, and immediately placed into a pre-cooled ice chest. Labels contain the following information: site name, date and time sampled, borehole number and depth, and the sampler's initials. The samples are transported under chain-of-custody to a state-certified laboratory. The laboratory analyzes soil samples within the prescribed holding time, storing them at temperatures below 4 degrees Celsius at all times.

Laboratory Analysis

Selected soil samples will be submitted to a California state-certified laboratory, and analyzed in accordance with procedures referenced in EPA SW 846 "Test Methods for Evaluating Solid Waste; Physical/Chemical Methods" as amended.

Former UST Dispenser Island and Piping Area

A groundwater well sample, and four excavation soil side wall and two base soil confirmation samples will be collected and analyzed by the following methods:

- Total petroleum hydrocarbons as gasoline, diesel and motor oil (TPH-g, d, mo) using EPA Method 8015M;
- BTEX and fuel oxygenates using EPA Method 8260

Former Storage Tank Areas

A base soil confirmation sample will be collected from the excavated areas at the former storage tank locations which include the areas directly below the current locations of the three tanks and at one location where one of the tanks was formerly located (total four areas to be sampled) by the following methods:

- TPH-g, TPH-d, TPH-mo using EPA Method 8015m,
- Volatile organic compounds (VOCs) using EPA Method 8260,
- CAM 17 Total Metals using EPA Method 6000-7000 series.

Recent Diesel/Motor Oil Spill and Stained Areas

ART will perform field observations for these areas during the soil removal which will include field screening for potential impacts from petroleum hydrocarbons utilizing a photo-ionization detector (PID), and olfactory and visual observations. Excavation will be completed in the field once clean native soils are observed and recorded in all areas excavated.

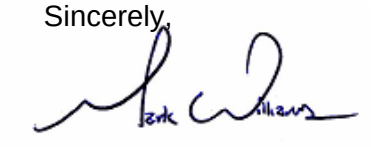
TASK 3 – Report Results

Upon completion of the work, ART will prepare a technical report including details of the work performed, tabulated analytical results of the samples submitted for quantitative chemical analysis, and figures depicting the site location and the sampling locations. The report will be submitted to the appropriate regulatory agencies as part of site closure requirements.

CLOSING

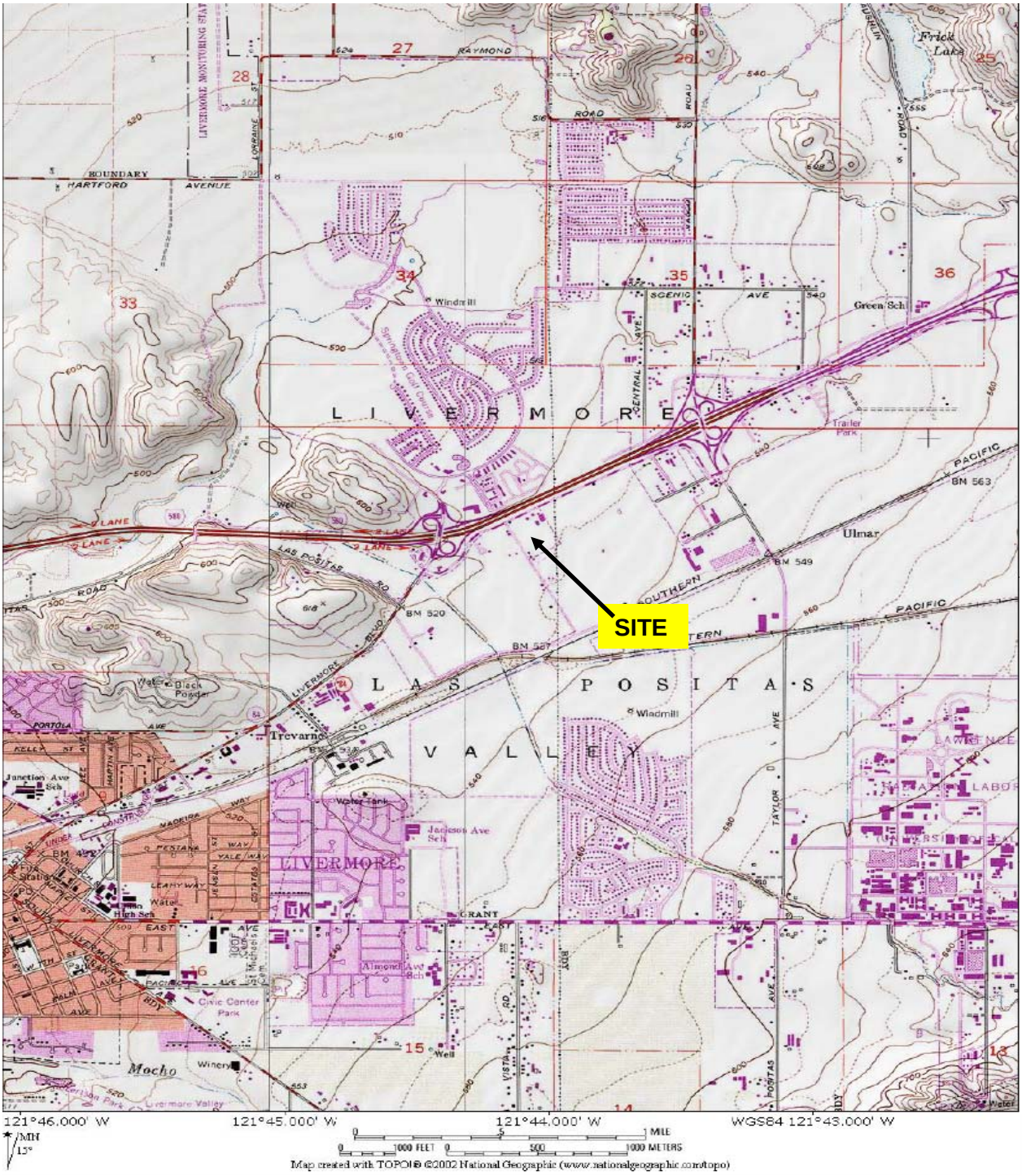
If you have any questions regarding this proposed workplan, please do not hesitate to contact the undersigned at (925) 858-2544. .

Sincerely,



Mark Williams
Staff Field Manager

Warren B. Chamberlain, PE.
Senior Project Manager



SOURCE: USGS SAN FRANCISCO SOUTH QUADRANGLE, CALIFORNIA (7.5 MINUTE SERIES) TOPOGRAPHIC MAP. OBTAINED FROM THE 2002 NATIONAL GEOGRAPHIC TOPO! SOFTWARE.

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SITE VICINITY MAP

461 McGraw Avenue
Livermore, CA

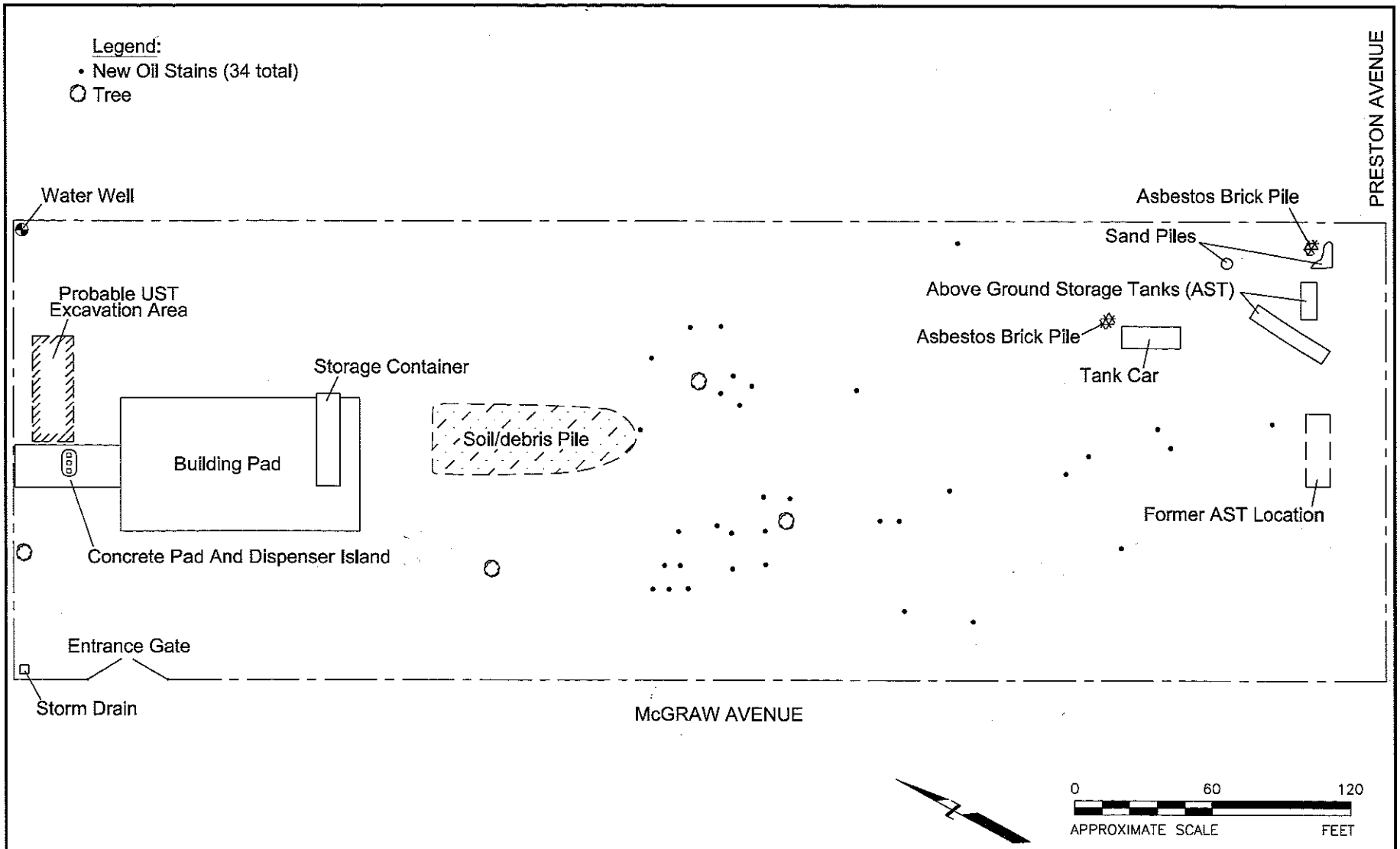

FIGURE 2
SITE PLAN

461 MCGRAW AVENUE
LIVERMORE, CALIFORNIA

Date:
01/04/07