Life Springs Environmental, Inc.

3275 Stevens Creek Blvd., #208, San Jose, CA 95117
ENVIRONMENTAL CONSULTING ENGINEERS 408-243-9292
General Engineering Contractor's License No. 709780 FAX 408-243-9696

November 6, 1998

Mr. Scott Seery
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Regarding: Revised Tank Closure Workplan
R.T. Nahas Property, Castro Valley

Dear Mr. Seery:

Pursuant to our discussions yesterday and your review comments, we have prepared a Revised Tank Closure Workplan for the subject Tank Removal Project. Three copies of our report are enclosed for your use in processing our permit application.

We are also enclosing, per your request, a copy of the Exemption From Workers' Compensation filed by our excavation subcontractor, Mr. David Escover of D-4 Excavation and Remediation Services. We are also enclosing a copy of Dave's business card.

We look forward to your expeditious processing of the permit application, and are prepared to pick it up in person so that we con pursue the next step of the application process with the Alameda County Fire Department.

Sincerely,

Life Springs Environmental, Inc.

Kenneth L. Meleen

Kenneth L. Meleen, P.E.

cc: Mr. Randy Nahas

STATE OF CALIFORNIA—STATE AND CONSUMER SERVICES AGENCY PETE WILSON, Governor

State of California Department of Consumer Affairs

CONTRACTORS STATE LICENSE BOARD
9835 GOETHE ROAD, SACRAMENTO, CALIFORNIA
MAILING ADDRESS: P.O. BOX 26000
SACRAMENTO, CALIFORNIA 95826
(916) 255-3900

EXEMPTION FROM WORKERS' COMPENSATION

Pursuant to Section 7125.1 of the Business and Professions Code, prior to issuance of a new license or reinstatement, reactivation, or renewal of an existing license, and as a condition of continued maintenance of an existing license, the applicant or licensee must have on file a Certificate of Workers' Compensation Insurance or a Certification of Self-Insurance from the Director of Industrial Relations. If the applicant or licensee has no employees, an exemption certificate must be submitted, certifying under penalty of perjury that he/she does not employ any person in any manner to be subject to the Workers' Compensation laws of California. A certificate or exemption is not required on an inactive license.

COMPLETE THIS EXEMPTION CERTIFICATE ONLY IF YOU DO NOT EMPLOY ANY PERSON.

NOTE: If the license is qualified by a Responsible Managing Employee (RME), an exemption certificate cannot be submitted.

OUT-OF-STATE CONTRACTORS: If you do not hire employees who reside in California, check this box [ ] and send the completed exemption certificate and a Certificate of Workers' Compensation Insurance which covers the employees from your state who are working in California. Note: If California does not have a reciprocity agreement with your state, you will be required to purchase a California Workers' Compensation policy to cover your employees while working in California.

PLEASE TYPE OR PRINT IN INK. FORMS COMPLETED IN PENCIL ARE NOT ACCEPTABLE.
Send the completed certificate to the Contractors State License Board (CSLB) at the address above.

LICENSE NUMBER OR PENDING APPLICATION NUMBER	
950110215	
FULL NAME OF BUSINESS (AS IT CURRENTLY APPEARS ON THE RECORDS OF THE CSLB)	
D-4 Excavation And Remediation Services, Inc.	
BUSINESS HAS/HAD NO EMPLOYEES AS OF (MONTH/DAY/YEAR): 1-1-96 If this date is older than 90 days, we will use the date the notice is received at our headquarters office as the effective date.	
DAYTIME BUSINESS TELEPHONE NUMBER (408) 637-5550	EVENING TELEPHONE NUMBER (408) 637-7923

FALSIFICATION OF ANY DOCUMENT IS CAUSE FOR DISCIPLINARY ACTION

On 1-12-96 (Date - Month/Day/Year) at Hollister (City) San Benito (County) California (State)

I certify under penalty of perjury under the laws of the State of California that the above named business does not employ any person in any manner so as to become subject to the Workers' Compensation laws of California. I further certify that the CSLB will be notified and sent a Certificate of Workers' Compensation Insurance or a Certification of Self-Insurance within 90 days of employing any person which results in the business becoming subject to the Workers' Compensation laws of California.

SIGNATURE OF OWNER, PARTNER, OR OFFICER _____

PRINT OR TYPE NAME OF THE PERSON SIGNING David Escover

THIS EXEMPTION WILL REMAIN ON FILE UNTIL YOU NOTIFY THE CSLB OF ANY CHANGES. PURSUANT TO SECTION 7083 OF THE BUSINESS AND PROFESSIONS CODE, FAILURE TO NOTIFY THE CSLB OF ANY CHANGES WITHIN 90 DAYS IS GROUNDS FOR DISCIPLINARY ACTION.

13L-50 (Rev. 5/95)

DAVE ESCOVER

EXCAVATION

D-4 EXCAVATION AND REMEDIATION SERVICES, INC

TANK REMOVALS
EXCAVATIONS OF ALL TYPE
CONCRETE DEMOLITION
TRANSPORTATION SERVICES

2520 FALLON RD
HOLLISTER, CA 95023
TEL: 408.637-5550
FAX:408.637-5481

Lic. # 719262

Pager 983-3462

Life Springs Environmental, Inc.
ENVIRONMENTAL CONSULTING ENGINEERS
General Engineering Contractor's License No. 709780

3275 Stevens Creek Blvd., #208, San Jose, CA 95117
408-243-9292
FAX 408-243-9696

REVISED TANK CLOSURE WORKPLAN

For

UNDERGROUND FUEL TANK SITE
R.T. NAHAS COMPANY PROPERTY
(Formerly Frank Tien Unocal 76 Service Station)
20405 Redwood Road
Castro Valley, California 94546

INTRODUCTION

This document is the Revised Work Plan for removal of two 10,000 gallon gasoline Underground Storage Tanks (UST's), and a 300 gallon Waste Oil UST from the subject site. The site is a former gasoline service station and automobile repair facility. A **Regional Map** showing the site in relation to adjacent roads and freeways, is presented as **Figure 1**. A **Site Plan, Figure 2,** shows the primary features of the site including UST and pump island locations. Areas of planned overexcavation are shown on the **Excavation Plan, Figure 3.**

This Work Plan is essentially the document for implementing a Revised Corrective Action Plan (RCAP) dated June 14, 1996, prepared by Philip Environmental Services Corporation of Emeryville, California (Project No. NHS101/16018.2001). This RCAP was reviewed in a March 9, 1998 letter from Scott Seery of the Alameda County Environmental Health Services (ACEHS), to Mr. Randy Nahas of the R.T. Nahas Company. Mr. Seery's comments and recommendations are incorporated into the Scope of Work as presented subsequently in this Work Plan.

This Workplan has been developed in accordance with the guidelines of Alameda County Environmental Health Services, Environmental Protection Division (ACEHS), the State of California publication "Leaking Underground Fuel Tank (LUFT) Field Manual: Guidelines for Site Assessment, Cleanup, and Underground Tank Closure" and the San Francisco Bay Regional Water Control Board (RWQCB) document "Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks."

REGULATORY AGENCY GUIDANCE

The March 9, 1998 ACEHS letter reviews 4 documents that provide background on soil and groundwater conditions on the property, and which recommend specific corrective action work tasks for previously detected soil and groundwater contamination. Mr. Seery presents arguments for limiting the amount of contaminant "chasing" in soil and groundwater, supporting instead a less extensive magnitude and extent of cleanup activities, based upon the risks identified in the Risk Based Corrective Action (RBCA) studies. Several key points of Mr. Seery's letter are as follows:

1. "Soil which may prove [to be] a future source of substantial groundwater degradation ... is to be excavated during UST post-closure activities," to the extent that doing so "may be accomplished in a cost-effective manner." Gasoline saturated soils, at a minimum, are to be removed.
2. The scope of overexcavation should be limited to zones immediately surrounding the UST pit, the pump islands, and along the vent and product pipeline trenches.
3. It is not appropriate to excavate the "test pit" area near boring SP-1, as proposed in the Philip RCAP.
4. The requirement for and location of any new monitoring well(s) can be determined after UST closures and soil overexcavation have been completed. Existing wells that are within the overexcavation area may be abandoned by removal during the overexcavation phase, and no special well removal permits are required.

OBJECTIVES

The primary objective of the proposed work is to remove the three underground tanks that have been in place for several decades; determine their relative soundness; and determine the extent of localized soil contamination, and if appropriate, shallow groundwater contamination related to operation of the UST's.

A secondary objective is to excavate soil on the fringe of the UST excavation which is known to be contaminated with petroleum hydrocarbons, to remediate this soil to render it reusable, and to backfill the excavation with this soil. Depth of excavation may be determined after samples collected from beneath the UST's have been analyzed. Alternatively, the depth of excavation may be determined by measuring headspace petroleum hydrocarbon (HPH) concentrations with a portable photoionization detector (PID) Excavation need not extend beyond zones that exhibit HPH concentrations less than or equal to 50 parts per million (ppm) above background levels. However, removal of substantial clean overburden to reach zones of contamination for subsequent removal is not anticipated.

Additional soil will be imported as necessary, to replace the volume of the removed tanks, concrete and asphalt pavement cover. Present plans call for the excavated areas to be resurfaced with asphalt concrete pavement, to restore the treated areas to beneficial use.

KEY CONTACTS

The following is a listing of current owner and other contact persons relative to this work.

Current Property Owner: R.T. Nahas Company, Randall E. Nahas, President
20630 Patio Drive
Castro Valley, California 94546
Phone: (510) 538-9600

Consultant/Contractor:	Kenneth Meleen, P.E. *Life Springs Environmental, Inc.* 3275 Stevens Creek Blvd., Suite 208 San Jose, CA 95117 Phone: (408) 243-9292 FAX: (408) 243-9696 Contractors Lic. No. 709780 w/Hazardous Materials Certificate Registered Civil Engineer No. C 17487 (License Expires 6/30/01)
Local Implementing Agency (LIA):	Alameda County Environmental Health Services Environmental Protection Division (Contact: Robert Weston) 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577 Phone: (510) 567-6700
Local Fire Department	Alameda County Fire Department (Contact: Bob Bowman) 22341 Redwood Road Castro Valley, CA 94546 Phone: (510) 670-5853

SITE DESCRIPTION

The subject property is a 0.37 acre parcel situated on the west side of Redwood Road, immediately north of a major shopping center (Anchor Tenant - Safeway) located northwest of the intersection of Redwood Road and Castro Valley Blvd. Site location is shown on the attached **Regional Map, Figure 1.**

The site was formerly an active Unocal Service Station and Automobile Repair Facility, built in 1964. The buildings were demolished, and fuel dispensers were removed in the summer of 1997. The three UST's, building foundation remains and concrete slabs, the pump islands, concrete covering the UST's, storm drainage facilities and monitoring wells are the primary features remaining on the site. A chain link security fence with two locked gates surrounds the property. The **Site Plan, Figure 2**, shows these primary features of the site.

The two larger UST's were installed in 1964, and it is likely that the smaller waste oil tank was installed about the same time. Of the two 10,000 gallon UST's, one stored unleaded regular gasoline, and the other stored unleaded premium gasoline. The tanks have been pumped out, but considering the shallow groundwater level and possible holes in the tanks, they will be pumped again immediately before UST removal.

A surface drain inlet on the northern side of the property discharges into the drainage system for the adjacent car wash to the west, which ultimately drains into the sanitary sewer system. Drain inlets on the south side of the property and within the alley south of the site are believed to drain into storm drain pipes flowing easterly and discharging into the storm drain system beneath Redwood Road. The nearest watercourse is Cull Creek, located about 0.9 miles east of the site.

METHODS AND PROCEDURES

The following is a description of the work tasks to be completed:

Permits

A one time EPA Identification Number will be obtained, and the State Board of Equalization will be contacted to obtain a Generator Hazardous Waste Number related to this site, if appropriate. The initial permit for UST removal will be obtained from ACEHS. This Work Plan, a Health and Safety Plan, and the required fee will be submitted to the ACEHS. Upon receipt of the ACEHS permit, additional fees will be paid, and the requisite permit from the Alameda County Fire Department (ACFD) will be obtained.

Notification

The UST locations will be marked on adjacent pavement, using white spray paint. Underground Service Alert (USA) will then be notified, the purpose being to have member public and private agencies mark underground Public Utilities in the vicinity of the property and UST's. Bay Area Air Quality Management District (BAAQMD) also will be notified of the pending excavation and soil remediation activity.

Groundwater Control

Currently, groundwater is at the level of the bottom of the larger tanks, about 11-feet below ground surface. To control and depress groundwater during the UST closure phase, we will excavate trenches within or directly adjacent to the UST cavity, most likely along both the east and west ends of the large UST's, sloping the trench bottom towards a catchment basin to be excavated at the north end. Groundwater accumulating in these trenches will be pumped out on the morning of UST removal. This groundwater will be added to the liquid pumped from the UST's, and will be transported and disposed as hazardous waste.

Groundwater control during the post UST-closure overexcavation phase will be accomplished using a similar technique - establishing a "sump" within which to accumulate groundwater, and having this sump pumped as often as necessary to control groundwater in the excavation bottom.

Monitoring Well Abandonment

It is likely that MW-2 and MW-3 will be destroyed in the process of carrying out the soil excavation operation. If the excavation needs to extend farther south than currently planned (see **Figure 3**), MW-1A and MW-101 also may be destroyed.

Tankpull Preparatory Work

Perimeter warning signs and barricades to alert the public and to keep traffic away from the work area will be installed. Warning signs will include "No Smoking" signs within 25-feet of the UST excavation. We will verify that all electrical power to the tank site has been disconnected. Excavation boundaries will be marked with spray paint, and these lines will be saw cut. Concrete slabs above the tanks, at the pump islands and around the vent pipes will then be broken up and hauled away to a recycling center. Clean granular fill will be imported and stockpiled on site.

The UST fill and vent pipes, product delivery and vent lines will then be exposed. These lines will be disassembled and removed in such a manner that any fluid remaining in the lines will drain back into the UST. Excavation will continue, to expose the top of the UST's.

Tank Removal

Early on the morning of UST removal, the tanks will be pumped to remove all liquid. The tanks will then be inerted by placing dry ice (CO_2) at the rate of 15-lbs per 1,000 gallons of tank capacity. We plan to place 150 lbs of dry ice in each 10,000 gallon tank, and about 20 lbs of dry ice in the waste oil tank. A Gastech Instrument will be available on site to monitor the Oxygen level and explosive limit within the tanks, the objective being to have the Lower Explosive Limit (LEL) less than 10%, and the Oxygen level below 10% (per ACFD Requirements).

We anticipate removing the UST's early in the afternoon. The ACEHS inspector will be scheduled to arrive at an appropriate time to verify that the tanks have been properly inerted, and to authorize their removal. We also will coordinate the arrival of the transport truck from Ecology Control Industries (ECI), and a crane needed to lift the tanks from the excavation.

Upon approval of the ACEHS Inspector, the tanks will be lifted out of the excavation and set on a nearby concrete or paved surface. There they will be rolled slightly back and forth, cleaned of adhering soil, and inspected for holes. Any holes will be marked with spray paint, and the tanks will be measured and photographed. They will then be loaded aboard the ECI transport truck and properly secured. All piping and fittings also will be loaded for transport and disposal. A manifest will be prepared and signed by the property owner. The UST's, appurtenant pipes and fittings will be transported and disposed at ECI's Richmond facility.

Soil and Groundwater Sampling and Analysis

At the direction of the ACEHS Inspector, two soil samples will be collected from beneath each 10,000 gallon UST (or from the sidewalls at the end of each UST, should groundwater be present in the excavation), and one from beneath the waste oil UST. Samples also will be collected from beneath the dispenser islands, and at 20-foot intervals along the product delivery and vent pipeline routes. Soil samples from the deep excavation will be collected by using the backhoe to excavate a fresh scoop of soil from the appropriate location, then pressing a 2-inch diameter by 6-inch long brass sleeve into this bucket of native soil until the sleeve is completely filled. Soil samples from below the pump islands and along the trench runs will be collected using a slide-hammer impact sampler lined with a 2-inch diameter by 6-inch long brass sleeve. Sleeve ends will be capped with aluminum foil and tightly fitting plastic caps.

If groundwater enters the excavation, a "grab" sample will be collected in a glass or plastic container, then transferred to duplicate 40 ml Volatile Organic Analysis bottles (VOA's) in such a manner that no air bubbles or "head space" remain within the container.

All samples will be collected by a State registered Civil Engineer. They will be labeled as to project name and number, sample location and depth, date and time of collection, and sampler ID. Sample data will be entered onto a Chain of Custody (COC) document, and the samples will be placed in a cooler on ice, pending transport to the analytical laboratory.

Soil and groundwater samples from the UST excavation, the pump islands and the pipeline runs will be analyzed as described in the ACEHS UST Closure Plan. All samples will be analyzed by a California certified hazardous materials analytical laboratory.

Overexcavation

After the tanks are removed and transported from the site, we will continue with overexcavation of the "primary area" identified in the RCAP. Again, we will attempt to limit the excavation to a line north of the storm drain inlet and MW-101, in order to maintain the excavation within the presently fenced area. The edges of the 16-foot deep excavation area will be sloped at ½:1 (horizontal to vertical) to maintain stability in the excavation side slopes.

The estimated quantity of overexcavated soil is 1,000 cubic yards. This soil will be segregated into two stockpiles: one containing clean overburden soil, and the other, contaminated soil. These stockpiles will be surrounded by a berm constructed with clean soil. The berm and all stockpiled soil will be underlain and covered with an impervious membrane.

When the planned perimeter of the excavation has been reached, soil samples from the capillary zone (about 11-feet deep) will be collected, placed in a plastic baggie and allowed to volatilize. After an appropriate time interval (30-minutes minimum), the vapor in the baggie will be analyzed using a field photoionization detector (PID). The concentration will be noted on the field log. The objective here is to determine whether the objective of having headspace concentrations no greater than 50 parts per million (ppm) above background levels, has been attained.

When the excavation has reached the predetermined boundaries, the sidewalls will be sampled in accordance with the RCAP, and at the direction of the ACEHS Inspector. Soil samples will be labeled as described previously, the data entered onto a COC, and the samples placed into a cooler on ice pending transport to the analytical laboratory. Soil samples will be analyzed at a State certified analytical laboratory, for TPHg/BTEX/MTBE.

If further site characterization is required after primary excavation has been completed, the investigation details will be worked out with ACEHS personnel. Such work is beyond the scope of this Work Plan.

Soil Remediation

Depending on favorable weather conditions, an aggressive soil remediation program may begin coincidentally with the primary excavation activity. Soil will be laid out in 12-inch beds, and will be rototilled with a Massey Ferguson tractor with 8' wide rototiller. We will adhere to the guidelines of the BAAQMD, which allows processing of up to 100 cubic yards per day. The

actual amount of soil being processed at one time will be contingent on BAAQMD limitations, the capacity of the equipment being used, and the amount of site space available for this purpose.

At the outset of this activity, we will be quite interested in the optimum number of times the soil needs to be re-tilled, and the amount of time required to complete the remediation to the prescribed levels of 5.0 mg/kg of total VOC's. The shallow beds will be tilled every other day, and after the second tilling, soil samples will be collected, composited and analyzed in the laboratory for TPHg/BTEX/MTBE. A duplicate sample will be analyzed in the field using the PID, so as to develop a correlation between PID readings and actual laboratory results. When the soil is judged to have been adequately remediated, confirmation samples will be collected and composited (4 samples per composite) at the rate of one composite for each 50 cubic yards of treated soil. When rainfall is forecast, soil in the beds will be covered with a membrane.

Backfill

Upon reaching the planned excavation depths, the imported granular material will be placed at the bottom of the excavation. This material will be compacted by rolling with a sheepsfoot roller attached to the backhoe. After all imported material has been placed, the clean overburden soil will be placed in 6-8 inch layers, conditioned with water as necessary to aid compaction, and compacted with a Bomag compactor. When clean overburden material stockpiles have been exhausted, properly remediated soil will be placed as described above. Soil backfill will be compacted as necessary to achieve a dry density equal to at least 90 percent of the maximum test value determined using ASTM Test Method D1557. Compaction testing will be performed intermittently throughout the backfill placement process.

Resurfacing

At the discretion of the owner, the upper 12-inches of backfill will consist of either 12-inches of Class 2 Aggregate Base, or a pavement section comprised of 8-inches of Class 2 Aggregate Base overlain by 4-inches of asphalt concrete.

Monitoring Well Installation

A replacement monitoring well may be required, depending upon whether MW-1A and/or MW-101 were destroyed. The need for and location of such a monitoring well will be at the discretion of ACEHS personnel.

Demobilization

Final site cleanup will include removal of all material and equipment used in or generated from the processes described above. Groundwater pumps, the holding tank, filter and meter will be removed. Carbon in the treatment units will be analyzed and profiled, then vacuumed out and disposed or recycled as appropriate. The Canisters also will be removed from the site. Security fencing presently in place will be left for removal or disposal at the discretion of the owner.

Summary Technical Report

At the conclusion of all activity described above, a summary Technical Report will be prepared that will document all of the activities performed. It will provide appropriate figures, and will include copies of all permits and hazardous waste manifests. Laboratory analytical results will be presented in summary table format, and copies of the actual results and COC's will be appended. This report will be prepared and signed by a State registered Civil Engineer.

PROFESSIONAL REGISTRATION

Project supervision, field mapping/logging and sample collection will be performed by Kenneth L. Meleen, a California registered Civil Engineer who has been practicing in the field of environmental engineering for the past ten years.

Laboratory analysis will be performed by Chromalab, Inc., a State-certified hazardous materials analytical laboratory.

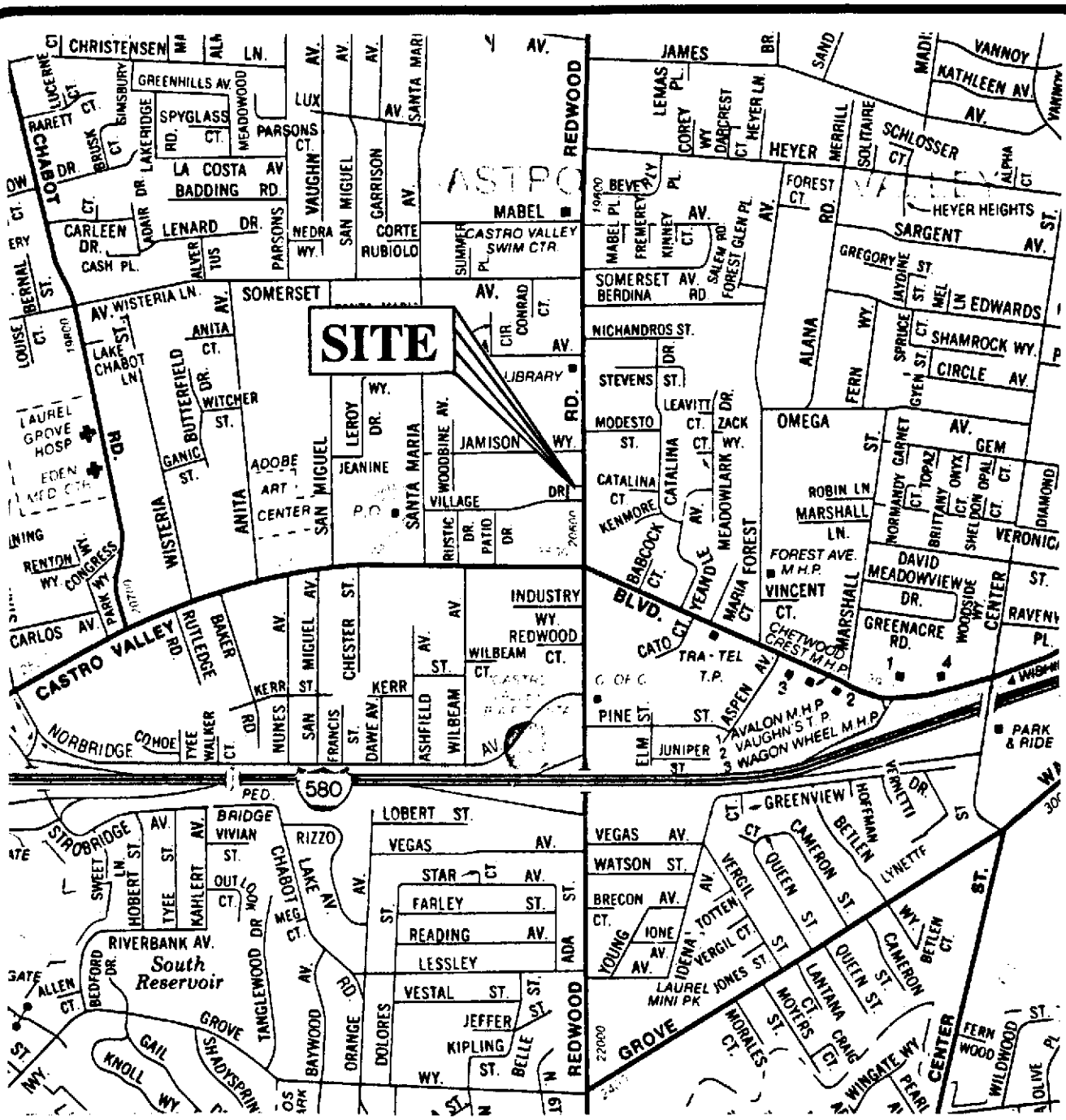
Life Springs Environmental, Inc. believes all issues relative to the tank removal project have been satisfactorily addressed in this Work Plan. Any questions or comments regarding this Workplan should be addressed to the undersigned at (408) 244-7202.

Workplan prepared by:

Life Springs Environmental, Inc.

Kenneth L. Meleen
Registered Civil Engineer Number C 17487
License Expires 6/30/01

cc: Mr. Randall E. Nahas



Life Springs Environmental, Inc.

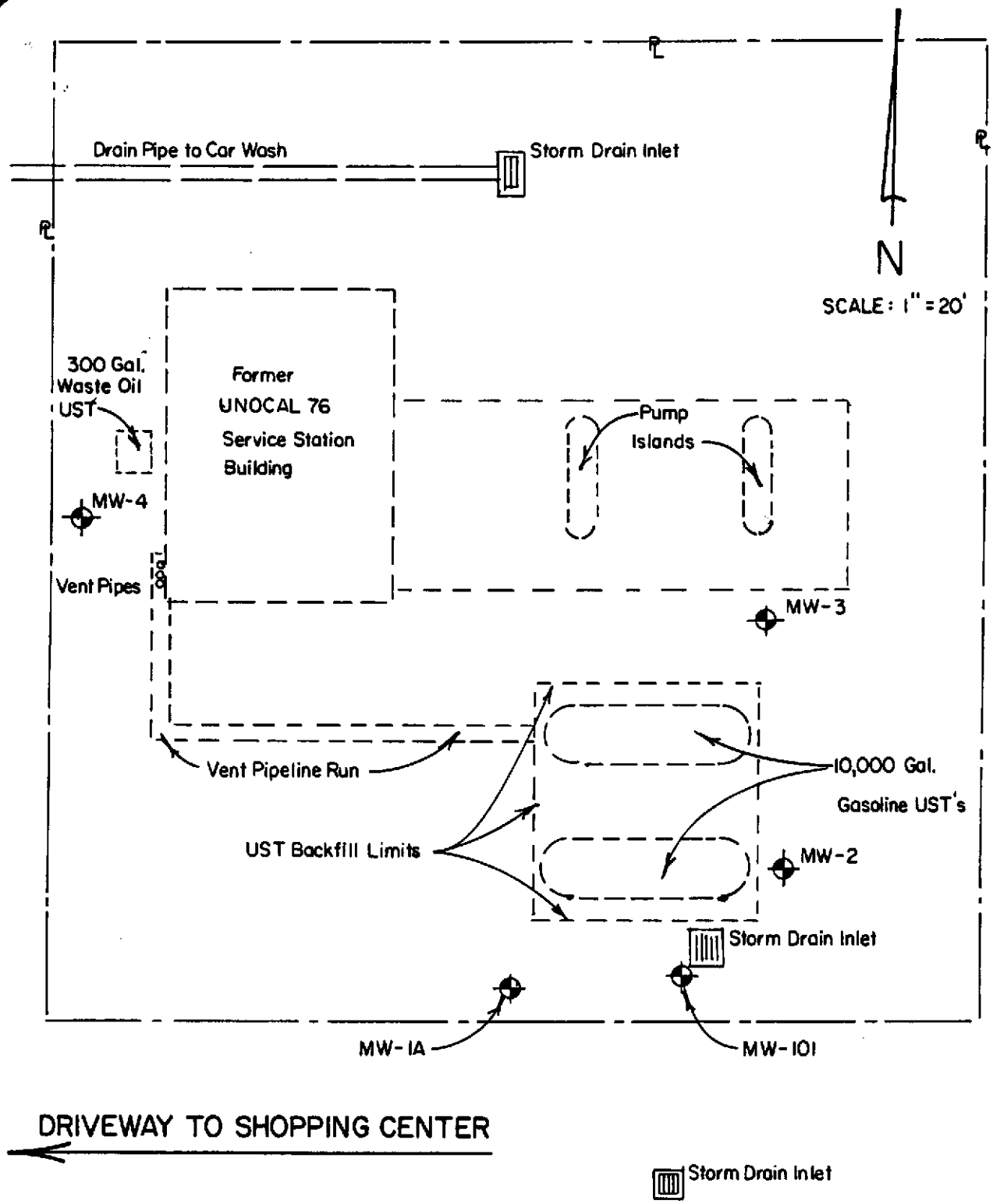
REGIONAL MAP

R.T. NAHAS COMPANY UST SITE

20405 Redwood Road
Castro Valley, California

Figure No.
1

98041.1
Project No.



Life Springs Environmental, Inc.

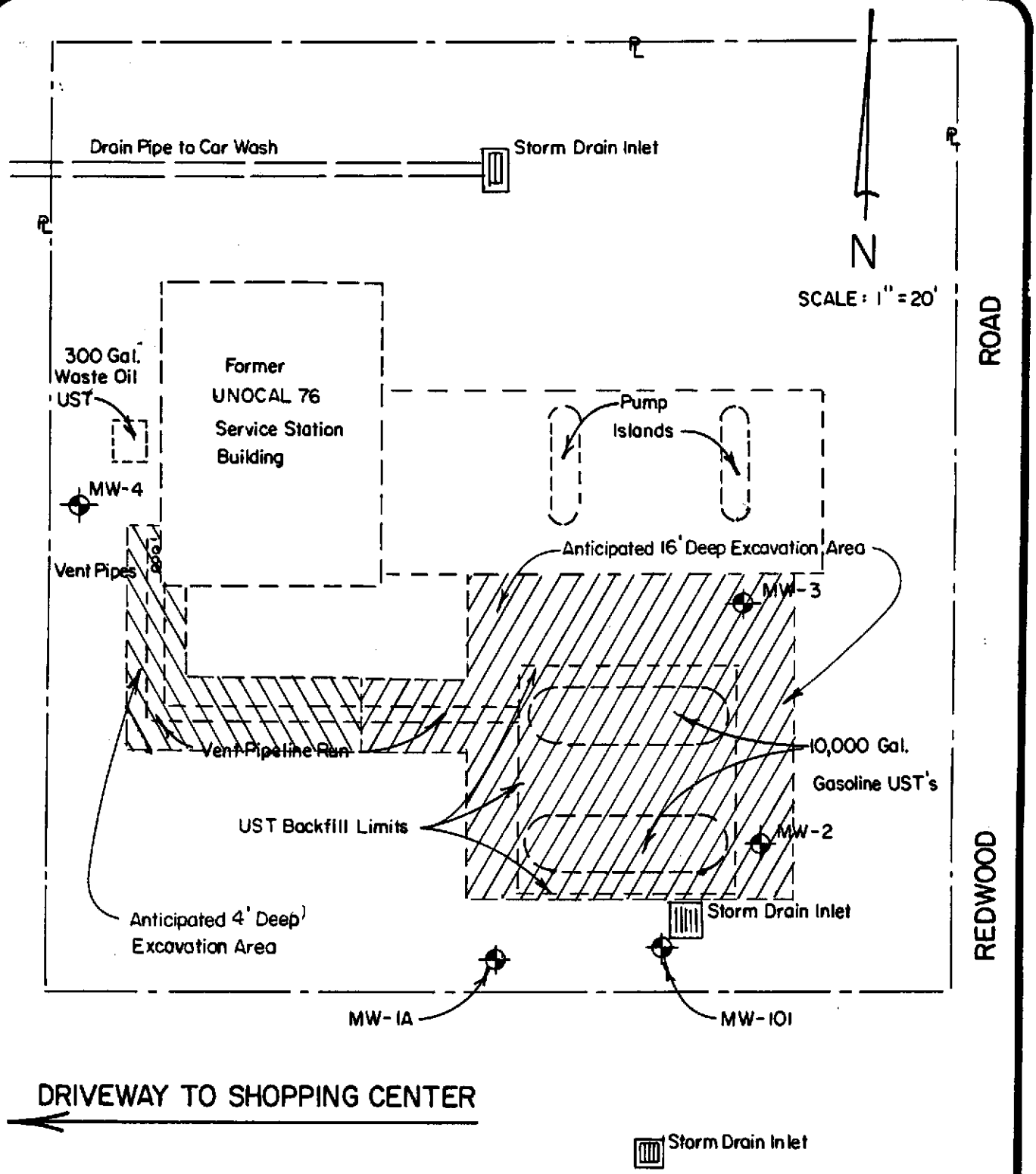
SITE PLAN

R.T. NAHAS COMPANY UST SITE

20405 Redwood Road
Castro Valley, California

Figure No. 2

98041.1 Project No.



Life Springs Environmental, Inc.

EXCAVATION PLAN

R.T. NAHAS COMPANY UST SITE

20405 Redwood Road
Castro Valley, California

Figure No. 3

98041.1
Project No.