CALPINE®

LOS ESTEROS CRITICAL ENERGY FACILITY: PHASE 2

Condition of Certification WASTE-6
Soils Management Plan

February 2011

Prepared by

CH2MHILL®

Condition of Certification WASTE-6

Soils Management Plan Los Esteros Critical Energy Facility: Phase 2

Prepared for

Los Esteros Critical Energy Facility, LLC

February 2011

CH2MHILL
2485 Natomas Park Drive, Suite 600
Sacramento, CA 95833

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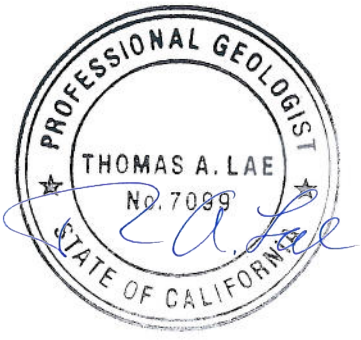

This report was prepared under the direct supervision of a California Professional Geologist

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Contents

SECTION 1.0

Introduction

Los Esteros Critical Energy Facility, LLC (the Applicant) obtained a license from the California Energy Commission (CEC) for continued operation of Phase 1 of the Los Esteros Critical Energy Facility (LECEF or the project) located in San Jose, Santa Clara County, California. Phase 1 is a nominal 180-megawatt (MW) natural-gas-fired peaking power plant consisting of four simple-cycle combustion turbine generators and associated equipment. The license also authorizes conversion of the peaker power plant to combined-cycle operation. The combined-cycle conversion will involve the addition of four heat recovery steam generators (HRSG), one steam-turbine generator (STG), a six-cell, plume-abated cooling tower, and ancillary equipment to the LECEF for a total combined nominal generating capacity of 320 MW.

The Applicant originally applied for a CEC license for Phase 1 of the LECEF in August 2001, under the expedited licensing provision promulgated under California Public Resources Code (PRC) §25552. The CEC granted the Phase 1 license in July 2002, and the LECEF was constructed and became operational in March 2003. The purpose of the October 2006 Phase 2 CEC Application for Certification (AFC) was to meet the requirement of PRC §25552 by recertifying (relicensing) Phase 1 and to certify the Phase 2 conversion to combined-cycle, which will allow the project to achieve much higher efficiency in generating power.

As licensed and constructed, the 21-acre LECEF Phase 1 site currently consists of the following features:

- Four GE LM6000 SPRINT combustion turbine generators (CTG) with water injection
- Oxidation catalysts and selective catalytic reduction (SCR) pollution control equipment, installed within four HRSG casings and stacks (these casings were installed during Phase 1 in anticipation of Phase 2)
- A 115-kilovolt (kV) switchyard
- A 150-foot-long, wood pole transmission line to Pacific Gas and Electric Company's (PG&E) 115-kV Los Esteros-Nortech transmission line, immediately to the west of the LECEF switchyard
- A 2,700-foot-long primary access road, named Thomas Foon Chew Way, linking LECEF with Zanker Road
- A 470-foot-long emergency access road, linking Thomas Foon Chew Way and Alviso-Milpitas Road
- A 55-foot-long, 10-inch-diameter natural gas supply line between the facility and PG&E lines 101 and 109

- Two 1,500-foot-long recycled water supply lines between the facility and the City of San Jose (the City) Waste Pollution Control Plant's (WPCP) recycled water supply pipeline in Zanker Road
- A 2,000-foot-long sanitary sewer discharge line to the City's sewer main in Zanker Road
- A 1,000-foot-long stormwater line between the LECEF and the Coyote Creek flood control channel to the east. Installation of a permanent stormwater outfall, which extended the Phase 1 temporary outfall 250 feet to the low flow channel was completed in accordance with CEC licensing requirements (Phase 1), a 2007 Soils Management Plan and other permit conditions (including permits from U.S. Army Corps of Engineers [USACE], Regional Water Quality Control Board [RWQCB], and California Department of Fish and Game [CDFG]) in October 2008.
- A 370-horsepower diesel fire pump

Phase 2 of the project will add the following major equipment to the Phase 1 facility:

- HRSGs tube sections and associated steam drums and piping
- HRSG duct burners
- A six-cell, plume-abated cooling tower
- A nominal 140 MW STG
- Circulating water pumps and boiler feedwater pumps
- A deaerating surface condenser
- A second ammonia storage tank to be installed in the existing secondary containment basin
- A 115-kV transmission connection to the adjacent PG&E Los Esteros Substation

The Applicant owns the 34-acre project parcel on which the LECEF Phase 1/Phase 2 facilities and temporary construction parking and laydown area are situated. All Phase 2 infrastructure (including HRSGs, STGs, cooling towers, storage tanks, various pumps, and 115-kV connection) will be sited entirely within the existing fenced Phase 1 site. The 13-acre temporary construction parking and laydown area required during Phase 2 construction is located immediately south of LECEF and north of Alviso-Milpitas Road. The parking and laydown area was also used for parking and laydown during Phase 1 construction.

This Soils Management Plan (SMP) addresses management of soils generated during construction of any onsite facilities at the LECEF and associated linear projects. This SMP covers the requirements of Condition of Certification (COC) WASTE-6 as stated in the CEC's Final Decision for LECEF Phase 2 dated October 2006. The scope of this SMP is limited to activities involving the excavation, characterization, management, reuse and/or disposal of soils at the LECEF site. All other onsite activities that could generate wastes will be managed in accordance with plans prepared by LECEF and approved by the CEC Compliance Project Manager (CPM) as required by the CEC's 2006 Decision.

This plan covers the following issues as required by COC WASTE-6:

- Land use history, including description and locations of known contamination
- The nature and extent of previous investigations and remediation at the site
- The nature and extent of unremediated areas at LECEF
- A listing and description of institutional controls, such as the City's excavation ordinance and other local, state, and federal regulations and laws that will apply to LECEF
- Names and positions of individuals involved with soils management and their specific roles
- An earthwork schedule
- A description of protocols for the investigation and evaluation of historically related chemicals such as dichlorodiphenyltrichloroethane (DDT) and previously unidentified contamination that may be potentially encountered, including any temporary and permanent controls that may be required to reduce exposure to onsite workers, visitors and the public
- Requirements for site-specific Health and Safety Plans (HSP) to be prepared by all contractors at LECEF
- Hazardous waste determination and disposal procedures for known and previously unidentified contamination
- Requirements for site specific techniques at the site to minimize dust, manage stockpiles, run-on and run-off controls, waste disposal procedures, etc.
- Copies of previous site assessments and relevant permits or closures from regulatory agencies (provided as Appendixes A and B)

This document was prepared under the direct supervision of Mr. Thomas A. Lae, a State of California Professional Geologist, License No. 7099. Mr. Lae has more than 20 years of experience in the field of environmental geology, including environmental assessments, remedial investigations, assessments of geologic hazards and resources for power plant licensing projects, Superfund site investigations, remedial investigations/feasibility studies, underground storage tank/oil water separator closures, landfill groundwater monitoring, and phase II environmental assessments.

SECTION 2.0

Background

This section provides a brief summary of land use history, nature and extent of known contamination, previous investigation and remedial activities at the site, and the extent of potentially impacted areas at LECEF. Also provided in this section is a brief summary of the institutional controls applicable to the LECEF site. Prior soil management activities and analysis have been extensive, and there are no known areas of the site in need of remediation.

2.1 History of Contamination and Cleanup at LECEF

The LECEF site was previously developed as an orchard with at least one residence. The orchard was removed by 1980, after which additional residential structures and several plant nursery complexes were constructed at the site. These later fell into disrepair and had become dilapidated prior to the construction of the LECEF. Structures within the plant nursery complexes that were located on the LECEF property included greenhouses, a vegetable cooler, agricultural chemical and other storage sheds, and boilers used to provide steam heat for the greenhouses, and a number of underground storage tanks (UST) and water wells.

Prior to the July 2, 2002, CEC licensing of the original LECEF, the site underwent both Phase I and Phase II Environmental Site Assessments (ESA) in succession. Historically, chemicals detected at the site included total DDT, arsenic, lead, toxaphene, dieldrin and endrin, consistent with the site's past agricultural use. The main pesticide detected was DDT and the related compounds dichlorodiphenyldichloroethane (DDD) and dichlorodiphenyldichloroethene (DDE), collectively referred to as total DDT. Pesticides, including total DDT, were found at levels up to 11,030 micrograms per kilogram (µg/kg). This concentration is greater than the 1,000 µg/kg level above which the soil would be considered hazardous waste by the State of California, if removed from the site. Petroleum hydrocarbons were reportedly not detected in the soil or in groundwater samples collected near the existing underground fuel storage tanks.

Site clearing and remediation for the LECEF Phase 1 project occurred in late 2001, prior to the completion of the CEC licensing process. As noted in the CEC Phase 1 Final Decision for LECEF dated July 2002, "Because the condition of the site attracted safety nuisances, the City of San Jose's Fire Department requested and received permission for the site to undergo limited demolition and remediation associated with dilapidated buildings, greenhouses, and associated facilities."

The remediation activities were conducted based on the recommendations of the ESAs and consisted of: (1) removal and disposal of three underground fuel storage tanks, (2) disposal of lead-contaminated debris, (3) disposal of asbestos wastes, (4) disposal of a limited amount of toxaphene and DDT-contaminated soil excavated from two pesticide mixing/storage areas, and (5) destruction of the onsite water supply wells. Excluding those soils removed from the pesticide mixing/storage areas, the remaining soils at the site were left in place

because the concentrations of the pesticides and metals were below the U.S. Environmental Protection Agency (EPA) Region IX Preliminary Remediation Goals (PRGs) of 12,000 µg/kg permitted for industrial use at the time of the remedial action. The locations of these known contaminants are identified in the Phase II ESA in Appendix B.

County permits were obtained for the removal of the onsite underground fuel storage tanks and destruction of the water wells prior to and during the LECEF Phase 1 construction. As indicated in the Phase 1 relicensing, staff noted that information was submitted addressing closure (CEC, 2005). The removed USTs included one 500-gallon gasoline tank, one 2,000-gallon diesel tank, and one 10,000-gallon diesel tank. The USTs were excavated and disposed of offsite in accordance with state and local regulations. As many as five water supply wells were also reported to have been located on the LECEF property. These wells were also destroyed under a permit from the Santa Clara Valley Water District in accordance with state and local regulations.

As stated, the underlying soils at the site may contain residual contamination including elevated levels of total DDT, dieldrin, endrin, lead, and arsenic. The current industrial soil PRGs for total DDT and arsenic are 7.0 milligrams/kilogram (mg/kg) and 1.6 mg/kg, respectively. Based on the data provided in the ESA reports, total DDT was detected in the site's surface and subsurface soils up to 11.03 mg/kg and arsenic was reported in concentrations of up to 67 mg/kg. As such, several areas at the site may contain subsurface soils that contain total DDT and arsenic at levels exceeding the current EPA Region IX PRGs.

The potential for exposure to these contaminated soils at LECEF is currently mitigated through covering with buildings, paving and gravel. Any earth disturbing activities that occur prior to construction of LECEF Phase 2 could exacerbate potential exposure through incidental ingestion, dermal contact, and inhalation of suspended particulates. The locations of these known contaminants are identified in the Phase II ESA in Appendix B.

2.2 Institutional Controls

The CEC retains sole jurisdiction for licensing and compliance of power plants that exceed 50 MW of capacity (as is the case with LECEF). The CEC CPM will be responsible for the final approval and implementation of the SMP. However, Condition of Certification WASTE-6 indicates that a copy of the Draft SMP be provided to the Berkeley Office of the California Department of Toxic Substances Control (DTSC) for review and comment.

Other institutional controls that currently apply to this SMP include those found in California Code of Regulations (CCR), Title 22, Division 4.5. These regulations detail requirements for management of hazardous and potentially hazardous wastes including requirements applicable to the generation, storage, transport, and treatment or disposal of wastes.

Construction activities will be performed in accordance with the requirements outlined in Title 17, Chapter 17.04, Part 6 of the San Jose Municipal Code pertaining to excavation and grading operations. This ordinance includes requirements for permitting, hazard management, erosion control, and inspections for excavation and grading activities.

To the extent necessary, the SMP shall be updated to reflect changes in laws, regulations or site conditions.

The current LECEF license issued by the CEC contains requirements for certain notifications in the event of a transfer of the LECEF site to another entity as well as requirements for ultimate closure of the site.

SECTION 3.0

Roles and Responsibilities

This section addresses the roles and responsibilities for the management, implementation, and oversight of this SMP. Table 1 lists major project milestones.

TABLE 1
Project Schedule Major Milestones

Activity	Date
Mobilization	May 16, 2011
Delineate and mark the boundaries of the construction zone	Prior to construction
Implement perimeter erosion and sediment controls; protect interior and down gradient inlets, waterways, and sensitive areas	Prior to construction
Stabilize construction entrance/exit and roadway (BMP TC-1 and BMP TC-2)	Prior to construction
Establish parking and staging areas for vehicle and equipment storage, maintenance, and fueling in accordance with BMPs NS-8, NS-9, and NS-10	Prior to construction
Establish laydown and parking area(s) for materials storage/staging in accordance with BMPs WM-1 through WM-6	Prior to construction
Establish concrete washout area in accordance with BMPs WM-8, NS-12, and NS-13	Prior to construction
Completion of construction	June 1, 2013

3.1 Owner

The LECEF compliance manager will be responsible for ensuring that all soil wastes generated as part of construction activities at the project site comply with this SMP and applicable laws, ordinances, regulations and standards. LECEF will be considered the generator of excavated soil for construction projects related to improvements or modifications to the existing facilities and related easements or right-of-ways associated with the LECEF. As the generator, LECEF will be responsible for the management of soil materials generated from site-related construction projects including the characterization, accumulation, and ultimate disposition of the material. This includes the determination of soils as hazardous or nonhazardous waste, monitoring of accumulation times and limits, maintaining records and documents in accordance with applicable federal and state recordkeeping requirements, and submittal of reports where required.

The LECEF compliance manager will provide oversight of the construction contractor during the implementation of the procedures outlined in this SMP and will ensure that all required documentation is prepared and submitted according to specified schedules. The LECEF compliance manager will also coordinate reviews of the required plans and reports by the CEC CPM, CEC Staff, and outside agencies (e.g., DTSC) as necessary.

LECEF Compliance Manager:	Ms. Allison Bryan	(925) 557-2250
Alternate SMP Contact:	Ms. Rosemary Silva	(408) 361-4954

3.2 Construction Contractor

On a project-specific basis, the construction contractor will be responsible for proper handling of excavated soil materials in compliance with the procedures outlined in this SMP and all applicable federal, state, and local laws and regulations.

The construction contractor will also be responsible for preparing a site-specific HSP for construction projects that is consistent with the SMP. The HSP will be prepared by a certified industrial hygienist and will be designed to protect onsite workers by including engineering controls, monitoring, and security to prevent unauthorized entry and to reduce construction-related hazards. The HSP will address the possibility of encountering subsurface hazards including hazardous waste contamination and include procedures to protect workers and the public.

The construction contractor will also designate an individual who will have responsibility for implementing project soil waste management activities under the oversight of the LECEF compliance manager.

This individual will provide day-to-day oversight of construction waste management including:

- Visual inspections of all waste storage areas
- Identification/classification of wastes generated
- Maintenance of storage areas
- Arranging for and coordinating the offsite transport of generated wastes
- Record keeping of inspections and waste transport/disposal/recycling activities.

The Phase 2 construction contractor and individual(s) responsible for SMP implementation will be provided to the CEC following contractor selection. Construction activities are expected to commence May 16, 2011, and last approximately 24 months.

SECTION 4.0

Management of Excavated Soil

This section addresses the need for any further soil investigation at the LECEF site and the characterization, onsite management, and re-use or disposal of excavated soils.

4.1 Potentially Contaminated Soils

As indicated in Section 2.1, LECEF conducted both a Phase I ESA and a partial Phase II ESA evaluating soil and groundwater contamination at the power plant site. Following the Phase II ESA and as recommended in the ESA, removal actions including tank removals, well closures, and soil excavation and disposal were conducted at the site. The general locations of these remedial activities relative to the current LECEF site are included on the figures in the Phase I and Phase II ESAs (provided on CD).

During construction activities in areas of expected contamination, the exposure of construction workers, site workers, visitors, and the public to potentially contaminated soil will be minimized by a series of control measures. Equipment operators and laborers will be required to wear personal protective equipment (PPE) such as dust masks or air-purifying respirators when necessary, and as designated by the HSP to avoid potential exposure. The required level of respiratory protection will be determined based the procedures outlined in the project HSP, and may include continuous air monitoring. Construction personnel that are expected to come in close contact with potentially contaminated soil may also be required to wear protective coveralls and gloves to minimize dermal contact. The PPE requirements for given tasks and anticipated site conditions will be provided in the project HSP.

To protect site workers, visitors, and the public from potential exposure to site contaminants, access to these construction areas will be strictly controlled and only those with the proper authorization and training will be allowed to access the site. Where necessary, the creation of potential dust from excavation activities will be controlled through the use of watering and/or silt fencing to avoid the creation of fugitive dust and other measures as outlined in the LECEF Air Quality Construction Mitigation Plan. Additional control measures as defined in the LECEF Stormwater Pollution Prevention Plan and Section 4.4 of the SMP will be used to minimize the effects of construction efforts on the surrounding environment.

4.2 Pre-excavation/Pre-grading Soil Characterization

In an effort to increase the efficiency of the construction process and to assess potential hazards of known and previously unidentified contamination, the Applicant may elect to characterize specific project work areas for contamination in situ prior to excavation or grading activities. Representative soil samples may be collected and submitted for laboratory analysis on an average frequency of approximately one sample per 100 cubic yards of soil to be characterized (for linear trenching samples will be collected at a frequency of at least one per 100 linear feet). If characterization is not performed prior to ground-disturbing activities, health and safety and soil management protocols will be implemented

based on the presumption that soil contaminants are present at potential concentrations levels that may require a higher level of worker protection.

4.3 Detection of Unanticipated Contaminated Soil

Once earthwork and construction activities commence, the following approach will be taken to address areas of unanticipated contamination beneath the surface soil. Field crews will be directed to stop work if they observe staining, unusual odors, or leaking containers during the excavation activities. The field personnel will be instructed to notify the construction superintendent, who will, in turn, notify the California licensed Professional Engineer (PE) or Professional Geologist (PG) designated to the project. The PE or PG will inspect and evaluate the potentially contaminated material and direct any collection of samples for analyses as provided in this SMP.

4.4 Stockpiled Soils from Construction Activities

Soil generated from Phase 2 earthwork and construction activities will be stockpiled on site for subsequent handling, sampling and characterization. Stockpiled soils will be placed into lined roll-off containers, or stored in 55-gallon drums, depending on the quantity of soil to be excavated. Stockpiled or drummed soil will be temporarily staged in a bermed area constructed with an impermeable polyethylene liner to prevent stormwater run-on and runoff. Stockpiles will be covered to prevent airborne migration of dust. Where possible, soils suspected or known to be hazardous waste will be stored separately from those considered nonhazardous. Liners used for hazardous waste soil stockpiles will be 20 millimeters or greater in thickness. Roll-off containers must be lined with impermeable plastic and have closeable tops that can be secured at the end of each day to prevent fugitive dust and protect the soil from rain or potential tampering by human activity. Soil materials placed in roll-off containers must not be stacked to levels that would prevent the lids from being closed properly.

4.5 Reuse of Soils on Site

Excavated and stockpiled soil will be reused on site to the maximum extent possible. Stockpiled soils intended for offsite disposal will be handled in accordance with Sections 4.7 and 4.8 of this SMP.

4.6 Sample Collection and Analyses

Soils collected for analysis and characterization at LECEF shall be handled as follows:

Soil samples may be collected at varying depths from approximately 0 to 24 inches below grade using a hand auger or similar device. In situ samples will be collected in laboratory-grade stainless steel sleeves or glass jars filled to capacity to eliminate headspace. Immediately after collection of the sample, the stainless steel sleeves or glass jars will be capped and labeled with the location, depth, date, and time of collection.

Properly labeled sample containers will then be placed on ice in a 4°C cooler for shipment to a California Department of Environmental Health (DEHS)-certified analytical laboratory under standard chain-of-custody protocols. The chain-of-custody document will be remain with the samples at all times and should include information regarding the sample

numbers, sample dates, sample times, analyses requested, and other instructions for the laboratory. Copies of the chain-of-custody documents will be maintained in the LECEF files.

All non-disposable equipment used for sample collection will be decontaminated prior to and after sampling at each location. Decontamination will be performed using either steam-cleaning methods or a triple-rinse method. The triple-rinse method will consist of cleaning the sampling equipment initially with a solution of potable water and alconox, liquinox, or equivalent non-phosphatic detergent. The equipment will then be rinsed in a solution of potable water, followed by a third rinse with deionized or distilled water to complete the procedure.

Based on historical uses at the site and the analytical results of the Phase I and Phase II ESAs, soil samples collected from locations at the site will be analyzed for total DDT, lead, and/or arsenic. Total DDT will be analyzed using EPA Method 8081A, and lead and arsenic will be analyzed using EPA Methods 6010B/7000.

Additional analyses for hazardous waste characterization including the total threshold limit concentration (TTLC), soluble threshold limit concentration (STLC), and toxicity characteristic leaching procedure (TCLP) may be performed where necessary for landfill disposal requirements. Trigger values for performing STLC or TCLP analyses will be based on the ten-times and twenty-times rule: if the concentration of an analyte is more than ten times the STLC value for that constituent, an STLC analysis is required; if the concentration is more than twenty times the TCLP value, a TCLP analysis is required.

Based on historical data for the site, total DDT, lead, and arsenic are the most likely triggers for characterization as hazardous waste. The TTLC, STLC, and TCLP trigger values for those constituents are provided in Table 2 and are based on the CCR Title 22 and Resource Conservation and Recovery Act (RCRA) regulations for classifying waste as California State Hazardous (TTLC and STLC) or RCRA hazardous (TCLP).

TABLE 2
Constituents on Concerns Limits

Constituent	TTLC Limit (mg/kg)	STLC Limit (mg/L)	TCLP Limit (mg/L)
DDT	1.0	0.1	--
Arsenic	500	5	5
Lead	1,000	5	5

Disposal facilities may require different TTLC values or trigger values for adding STLC and TCLP than those listed above. In addition to the consideration of the hazardous waste criteria, California Health and Safety Code, Section 25157.8 prohibits land disposal of lead in excess of 350 mg/kg in any location other than a Class I landfill, or a landfill specifically approved for such a purpose.

Future construction projects at the site may require a revised sampling approach based on the location and scope of work to be performed. Revisions to the sampling approach will be addressed by preparing an addendum to this SMP for those sections that require modification to address future construction projects.

4.7 Soil Disposal

Soils that are not reused on site will be sampled and characterized for disposal. There are two possible scenarios for ultimate disposition of the excavated soils that are not reused onsite. The number of composite samples will be dependent on the quantity of excavated soil to be characterized but will be based on a rate of approximately one sample per 1,000 cubic yards of soil. (In-situ characterization results may be used in lieu of additional characterization if determined to be representative of the excavated soil.) Analysis could indicate: (1) Soils are below designated waste levels and are thus acceptable for disposal or reuse at a Class II or III landfill; or (2) the soils exceed not only industrial screening levels but are also above either designated waste levels or are characterized as hazardous waste under CCR Title 22, Division 4.5.

4.8 Waste Disposal Sites

Nonhazardous soil waste that is not reused onsite and is not considered a designated waste will be disposed of at a Class III landfill. Soils that are considered a designated waste will be disposed of at a Class II disposal facility. Hazardous waste will be shipped to a fully permitted offsite Class I disposal facility. The construction contractor will be responsible for establishing contractual agreements with waste disposal and/or recycling companies including any additional chemical constituent analysis that may be required by the landfill. For ultimate disposal, California has the following three hazardous waste (Class I) landfills:

Clean Harbors Buttonwillow Landfill in Kern County: Buttonwillow has been permitted to accept all hazardous wastes except flammables, PCB with a concentration greater than 50 parts per million, medical waste, explosives, and radioactive waste with radioactivity greater than 1,800 picocuries (Buoni, 2009).

Clean Harbors Westmoreland Landfill in Imperial County: The landfill's conditional use permit prohibits the acceptance of some types of waste, including radioactive (except geothermal) waste, flammables, biological hazard waste (medical), PCB, dioxins, air- and water-reactive wastes, and strong oxidizers (Clean Harbors, 2011).

Chemical Waste Management, Inc's Kettleman Hills Landfill in Kings County: The Class I landfill is permitted for and will accept all hazardous wastes except radioactive, medical, and unexploded ordnance (CIWMB, 2007).

In addition to landfills, approximately 25 offsite commercial hazardous waste treatment and recycling facilities operate in the region, including facilities owned by Safety-Kleen in Reedly and San Jose, California. These facilities have sufficient capacity to recycle and/or treat hazardous waste generated in California that does not go to landfills.

SECTION 5.0

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Appendix A
Phase I ESA – Lowney Associates - April 13, 2000

LOWNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

Phase I Environmental Site Assessment Update

Highway 237 and Coyote Creek

55-Acre Parcel

San Jose, California

This report has been prepared for:

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April 13, 2000

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TABLE OF CONTENTS

MV, 587-12D Calpine 55 acre DOC

PHASE I ENVIRONMENTAL SITE ASSESSMENT UPDATE

HIGHWAY 237 & COYOTE CREEK

55-ACRE PARCEL

SAN JOSE, CALIFORNIA

1.0 INTRODUCTION

1.1 Purpose

This Phase I environmental site assessment update was performed for Calpine, who we understand is considering developing the site for commercial use.

The purpose of this study was to document environmental concerns at the site related to current and historic chemical use and to evaluate the potential for a release of hazardous materials from on- or off-site sources that could significantly impact the site's soil and/or ground water quality.

1.2 Scope of Work

As requested, the scope of work for this update report was performed to bring the original Phase I study for the site (Lowney Associates, February 15, 2000) into general accordance with the American Society for Testing and Materials (ASTM) Designation E 1527-97 as outlined in our proposal dated March 9, 2000. The scope of work included the following tasks.

- Site walk-through and observation of existing conditions.
- Distribute site history questionnaires.
- Interview owners/workers at the site

This scope of work was combined with the previously completed takes to bring the document into general compliance with ASTM requirements. The previously completed tasks are outline below:

- A drive-by reconnaissance of the site and adjacent properties for readily observable indications of current or historic activities that have or could significantly impact the site.
- Review of readily available topographic maps and reports to evaluate local hydrogeologic conditions, including anticipated ground water depth and flow direction.

- Review of readily available documents, maps, and aerial photographs, and interviews with knowledgeable persons to evaluate past land uses.
- Review of a regulatory agency database report to evaluate the potential impact to the site from reported contamination incidents at nearby facilities.
- Review of available regulatory agency files to obtain information about the use and storage of hazardous materials at the site.

Our scope of services did not include sampling or analysis of on-site building materials, air, soil, or ground water. The limitations of this Phase I environmental assessment are presented in Section 6.0; the terms and conditions of your agreement are presented in Appendix A.

2.0 SITE RECONNAISSANCE

2.1 Site Location and Ownership

The approximately 55-acre site, shown in Figures 1 and 2, is located near the northwest corner of the intersection of Highway 237 and Coyote Creek in San Jose, California and is denoted as assessor's parcel number (APN) 015-31-002. The site is located in an agricultural, residential, and commercial area and is bounded by agricultural land (owned by Cilker Orchards) to the north; Alviso-Milpitas Road to the south; agricultural, residential, and commercial property to the east; and vacant land to the west. There are currently eight property owners; an owner list is presented in Appendix B.

2.2 Topographic Features and Hydrogeology

Based on U.S. Geologic Survey (USGS) topographic maps, the site's elevation is approximately 10 to 15 feet above mean sea level. Topography in the vicinity of the site slopes gently to the north toward the San Francisco Bay. Based on our geotechnical investigation and our experience in the area, the shallow water-bearing zone is variable across the site, and likely encountered from near the ground surface to depths of approximately 19 feet. Ground water beneath the site likely flows northeast toward Coyote Creek and the San Francisco Bay.

2.3 Site Visit

Our representative, environmental geologist John McCain, visited the project site on March 23, 2000 and was accompanied on a part-time basis by Ms. Elizabeth Lin (co-owner of the Lin Nursery, Inc., 1515 & 1515-A Alviso-Milpitas Road), Mr. Wilson Doe (representing the 1515-C Alviso-Milpitas Road property), and Ms. Lily Kwong (co-owner of 1515-E Alviso-Milpitas Road property). A subsequent site visit was made on April 11, 2000 by our representatives, environmental geologist John McCain and Senior Project Geologist Douglas Young; our representatives were accompanied by Mr. Tuck Lin, Mr. Tom Huen, Ms. Lily Kwong, and current tenants at the 1515-B Alviso-Milpitas Road property.

The site was developed with several nursery complexes and residential structures. Several greenhouses were present throughout the site. Alviso-Milpitas Road permitted access along the southern property boundary of the site, while a gravel drive (the middle road) provided access through the center of the site. The middle road extended north from Alviso-Milpitas Road to the northern portion of the site (Figure 3). The current site tenants are listed in Table 1.

Table 1. Curent Site Tenants

Address	Tenant	General Use
1515 Alviso-Milpitas Road	Ms. Elizabeth Lin	Residence
1515-A Alviso-Milpitas Road	Lin Garden	Nursery
1515-B Alviso-Milpitas Road	Hoo Gee Hom	Living quarters and nursery
1515-C Alviso-Milpitas Road	Hing Doe	Living quarters and nursery
1515-D Alviso-Milpitas Road	Tim Wong	Living quarters and nursery
1515-E Alviso-Milpitas Road	Harry Kwong, Lily Kwong	Three residences and flower nursery
1515-G Alviso-Milpitas Road	Hoo Gee Hom, My Sui Hoo	Living quarters
1515-H Alviso-Milpitas Road	Luk Loo Nursery, Inc.	Living quarters
1515-K Alviso-Milpitas Road	Hoo Gee Hom, My Sui Hoo	Living quarters and nursery
1515-L Alviso-Milpitas Road	Lau Brothers Nursery	Nursery
Unknown	United Flower Growers Association	Meeting hall and nursery

Descriptions of the individual properties comprising the 55-acre project site are summarized below.

2.3.1 1515 & 1515-A Alviso-Milpitas Road (Lin Property)

The approximately 10-acre property was developed with an approximately 2,000-square-foot residence, approximately 525-square-foot mobile home, approximately 1,225-square-foot structure (including vegetable cooler and living quarters), approximately 1,400-square-foot boiler structure, approximately 50-square-foot pesticide storage shed, approximately 162,800-square-feet of greenhouse space, and other small storage sheds (Figure 3). The wood framed and finished residence was located on the southwest corner of the site and fronted Alviso-Milpitas Road; observations of the interior of the residence were not made. An approximately 36-foot by 8-foot diameter underground storage tank (UST), formerly used to store diesel, was resting on the ground surface approximately 50 feet east of the residence adjacent to the greenhouses. The UST was empty and had a tar coating. No holes were observed in the tank. No staining was observed on the ground surface beneath the UST.

Based on an April 11, 2000 conversation with Ms. Elizabeth Lin (co-owner of the property), the diesel UST was formerly located beneath the ground surface, to the east of the boiler structure on the property. The UST reportedly floated to the ground surface during a flood in approximately 1982. The UST was then emptied

of diesel fuel (an unknown volume) and moved to its present location. The diesel fuel was reportedly taken off-site.

The mobile home was located approximately 20 feet northwest of the residence and had a wood framed and finished garage structure located adjacent to the west (Figure 3); no observations of the interior of the mobile home were made since it was private. An approximately 4-foot by 4-foot barbeque pit was located adjacent to the north of the garage structure; Ms. Elizabeth Lin reported that the tenants reportedly use the pit to cook.

A vegetable cooler structure was located approximately 75 feet north of the residence (Figure 3). A small, one-room living quarters was located within the southeastern corner of the structure, and a small office was located adjacent to the west of the living quarters. The vegetable cooler (no longer in use) was located in the northern portion of the structure. The cooler and other small storage areas located in the northern portion of the structure contained household debris including furniture, paper, and clothing. Approximately twenty 50-pound bags of fertilizer were located on the northwest corner of the structure.

Domestic trash, irrigation plumbing, concrete, wood, and other debris were scattered on the east side of a fence along the western property boundary. An approximately 500-gallon gasoline UST was reportedly located approximately 40 feet northwest of the cooler/living quarter's structure (Figure 3). A vent pipe for the UST was observed to extend out of the ground on the west side of the fence running along the western property boundary. An asphalt pad was observed on the east side of the fence in the area over the UST location.

An agricultural chemical storage shed was present approximately 10 feet north of the location of the gasoline UST (Figure 3). The wood-framed and metal-sided storage shed contained several gallon containers of fertilizers and 50-pound bags of dry fertilizers. Several of the containers and bags had been damaged exposing virgin fertilizer to the shelves and dirt flooring within the shed. Although, no pesticides were observed within the shed, a sign posted on the front door of the shed read "Pesticide Storage Area."

The concrete floored boiler structure was located approximately 160 feet northeast of the residence. The boiler was used to provide steam heat for the greenhouses on-site and was serviced by natural gas. An approximately 10-foot by 6-foot above ground boiler tank, an approximately 10,000-gallon water tank, an approximately 100-gallon water return tank, hand tools, and an agricultural chemical mixer were located within the boiler structure. Though the boiler was no longer in use, the 10,000-gallon wooden water tank contained approximately 8,000-gallons of water which feeds the irrigation system throughout the greenhouses. The agricultural chemical mixer, located in the northwest corner of the structure, had a mixing/holding tank and pump to pump the agricultural chemicals through a series of 1-inch-diameter metal pipes running from the boiler structure throughout the greenhouses on the property; agricultural chemicals observed within the boiler structure included fertilizers and fungicides.

A PVC cased water supply well was observed approximately 15 feet west of the boiler structure. The well was capped at the ground surface and had a series of metal piping apparently running to the boiler structure.

A second pesticide storage shed was located approximately 25 feet east of the boiler structure (Figure 3). The shed contained pesticides and herbicides including Subdue fungicide, Botani Gard ES, Mycainsecticide, Mavrik Insecticide, Enstar, Daconil, 2787 WDG, Phyton 27, and Micro Lin. The agricultural chemicals were stored within the shed on shelving, in containers no larger than 1 gallon or 5 pounds. A pesticide mixer was observed in the shed and appeared empty. Metal piping ran from the pesticide mixer into the surrounding greenhouses. The dirt floor of the pesticide shed appeared to have been impacted with agricultural chemicals.

The greenhouses were wood framed and plastic/fiber sided and located on the north and east portions of the property (Figure 3). The greenhouses were covered with clear plastic to allow the sun to penetrate. Systems containing 1-inch diameter metal piping (pesticide/fertilizer system), 3-inch-diameter metal piping (steam system), and 1-inch PVC piping (irrigation system) ran along the ceiling of the greenhouses. The greenhouses located on the northern portion of the property were partially collapsed. The greenhouses to the east and northeast of the residence were operational, although they are reportedly being phased out of operation.

The property adjacent to the north of the greenhouses was vacant and overgrown with weeds and tall grasses. Two inoperative vans were observed near the middle road. A pile of household debris was located on the north side of the vans and contained metal, wood, clothing, furniture, and trash.

2.3.2 1515-B Alviso-Milpitas Road (Hom Property)

The approximately 5-acre property was developed with an approximately 1,500-square-foot living quarters, boiler structure, pesticide storage and mixing shed, and greenhouses, all located on the west side of the middle road (Figure 3). A concrete floored garage space was located in the north portion of the living quarters and served as a cleaning and boxing area for the vegetables grown in the greenhouses on-site. A metal boiler tank and metal water return tank were located in a concrete floored shed approximately 20 feet north of the living quarters; both tanks were mounted on stands. The boiler was fueled by natural gas; metal piping ran from the boiler into the greenhouses adjacent to the west which allowed the boiler to provide steam to the greenhouses. An approximately 10,000-gallon water AST and an approximately 100-gallon water AST were located adjacent to the east of the boiler and apparently supplied the boiler as well as the greenhouses. A second boiler tank (empty and inoperative) was located outside to the north of the boiler structure. According to the current tenants, the tank has been in this location and inoperative since approximately 1978.

The wood floored pesticide storage and mixing shed was located adjacent to the northwest of the boiler structure (Figure 3). Less than 5 pounds of pesticides (Dispel 2x) were observed to be stored on shelving within the shed. A pesticide mixer was located in the center of the shed. The mixer was empty and rested directly on the wood floor of the shed. Metal piping ran from the mixer to the greenhouses adjacent to the west.

The approximately 80,000 square feet of greenhouses were currently being used for cultivation of vegetables. Systems containing 1-inch-diameter metal piping (pesticide/fertilizer system), 3-inch-diameter metal piping (steam system), and 1-inch PVC piping (irrigation system) ran along the ceiling of the greenhouses.

2.3.3 1515-C Alviso-Milpitas Road (Doe Property)

The approximately 6-acre property was occupied by a living quarters, boiler and water tank structure, pesticide storage and mixing shed, and greenhouses (Figure 3). The approximately 12,000-square-foot, wood framed and metal sided living quarters was located on the west side of the middle road and reportedly contained 10 bedrooms. Observations of the interior of the living quarters were not made. The southeastern corner of the living quarters contained a concrete floored garage. A vehicle, tractor, and household items including clothing, furniture, and trash were observed in the garage area.

A boiler and water tank structure was located adjacent to the west of the living quarters (Figure 3). The wood framed and metal sided boiler and water tank structure was concrete floored and contained a metal boiler tank and wooden water AST (approximately 10,000-gallon tank). The boiler tank rested on a stand and the metal piping carried the steam from the boiler into the greenhouses on the west side of the property. The boiler was currently fueled by natural gas.

The pesticide storage and mixing shed was located adjacent to the west of the boiler and water tank structure (Figure 3). The shed contained less than 50 pounds (powder) and less than 5 gallons (liquid) of fertilizers and pesticides including Malthion, B-Nine-SP, and Acti-Dione-PM. The pesticides and fertilizers were stored on shelves in the shed in individual containers sold by garden shops/nursery supply stores. The pesticide mixer was located in the center of the shed. The machine was empty and the metal piping used to carry the pesticides to the greenhouses extended out the western side of the shed. The metal piping was above ground and ran to the greenhouses on the west side of the property.

The greenhouses were covered with clear plastic to allow the sun to penetrate. Systems containing 1-inch diameter metal piping (pesticide/fertilizer system), 3-inch diameter metal piping (steam system), and 1-inch PVC piping (irrigation system) ran along the ceiling of the greenhouses.

An approximately 10,000-gallon diesel UST was reportedly located on the east side of the living quarters structure (Figure 3). This tank apparently serviced the boiler

located on this property. The vent pipe for the tank was observed on the east wall of the living quarters.

2.3.4 1515-D Alviso-Milpitas Road (Wong Property)

The approximately 3-acre property contained a boiler structure, living quarters, and a pesticide storage shed. Greenhouse structures were present on the west portion of the property and appeared to be used for the cultivation of flowers. The greenhouses were covered with clear plastic to allow the sun to penetrate. Systems containing 1-inch diameter metal piping (pesticide/fertilizer system), 3-inch-diameter metal piping (steam system), and 1-inch PVC piping (irrigation system) ran along the ceiling of the greenhouses.

The concrete-floored, wood framed and fiberboard sided boiler structure contained a metal boiler tank and a metal water tank; both tanks were mounted on stands. The boiler was fueled by natural gas and reportedly has not been used in the past year. Mr. Thomas Huen (representative of Mr. Tim Wong, the current property owner) reported that the boiler was never fueled by a diesel UST.

The two wood framed and metal-sided living quarters structures were located adjacent to the north of the boiler structure; a total of five bedrooms were reported within the living quarters structures. No observations of the inside of the living quarters were made.

The concrete floored, wood framed and fiberboard sided pesticide storage shed was located to the north of the boiler structure. Approximately 5 gallons of Malathion 8 were observed to be stored on shelving within the shed. A pesticide mixer was located in the south side of the shed and appeared empty. Metal piping was observed to extend from the machine into the greenhouses on the property.

2.3.5 1515-E Alviso-Milpitas Road (Kwong Property)

The approximately 1.65-acre property contained three residential structures and three greenhouse areas. The residential structures (two 3-bedroom structures and one 2-bedroom structure) appeared to be modular type homes; observations of the interiors of the residences were not made.

The greenhouse areas were located west of the residences and had wooden frames covered with plastic sheeting. One of the greenhouses extended onto the United Growers Association (UFGA) property adjacent to the north.

An approximately 4-foot by 3-foot, metal pesticide storage shed was located on the north side of the northern most residence (Figure 3); the shed was empty. Though Ms. Kwong reportedly stored the bulk of the pesticides in the metal shed, a second, dirt floored pesticide storage and mixing area was observed within a shed located adjacent to the greenhouses on the western portion of the UFGA property (adjacent to the north). Ms. Kwong reported that nursery operations ceased approximately three years ago, and only limited flower growing has occurred since that time.

2.3.6 The United Flower Growers Association

The approximately 1.65-acre United Flower Growers Association (UFGA) property was located on the northwestern corner of the site. The property was developed with an approximately 4,400-square-foot single story building used as a meeting hall with some office and classroom space (Figure 3). A garage was located in the western portion of the building and appeared to be empty with the exception of an approximately 20-gallon pesticide spreader (empty) and a lawnmower. Approximately four propane canisters (approximately 5 feet tall) and an outdoor grill area were located on the east side of the building. A gravel parking area was located on the south and west sides of the building. A former propane tank concrete pad was located approximately 30 feet southeast of the building. Ms. Lily Kwong reported that the tank was removed approximately three years ago.

Two metal ASTs were located on the west side of the building. The ASTs were empty, and one (approximately 500-gallon) was on a stand while the second (approximately 100-gallon) rested on the ground surface. Ms. Kwong reported that the 500-gallon tank was used for storage of pesticides at an off-site location, and the 100-gallon tank was reportedly used to store water at an off-site location. Both tanks were brought on-site from the off-site location and were reportedly never used on-site. Plastic sheeting, metal irrigation piping, and metal fencing debris was present on the western portion of the UFGA property.

A former greenhouse area operated by Ms. Lily Kwong extended up onto the western portion of the UFGA property. A shed located adjacent to the east of the greenhouse contained a pesticide mixing and storage area (Figure 3). The mixer was empty and less than 5 pounds of pesticides were observed in plastic containers and bags on the dirt floor of the shed; the dirt floor of the shed appeared to have been impacted with the pesticides.

2.3.7 1515-G and 1515-K Alviso-Milpitas Road (Hom Property)

The approximately 10-acre property was located at the southeastern corner of the site (Figure 3). The property was developed with three living quarters structures (1515-K Alviso-Milpitas Road, 1515-G Alviso-Milpitas Road, and an unlabeled living quarters), a boiler structure, and greenhouses. The 1515-K and 1515-G Alviso-Milpitas Road living quarters were wood framed and metal-sided (Figure 3). The 1515-K Alviso-Milpitas Road structure contained approximately two bedrooms, a kitchen, and a vegetable cooler. The vegetable cooler had been converted into a dry storage space. An apparent agricultural chemical storage area was located in a shed adjacent to the west of the 1515-K Alviso-Milpitas Road structure. Though no pesticides were observed in the shed area, Ms. Elizabeth Lin reported that limited, historical pesticide storage and mixing occurred within the shed. Greenhouses were present to the north of the living quarters.

The interior of the 1515-G Alviso-Milpitas Road living quarters was not observed, but the structure appeared to have at least two bedrooms. The third living quarters structure (not labeled with a number address) was located adjacent to the west of

the 1515-K Alviso-Milpitas Road living quarters structure (Figure 3) and appeared to contain one bedroom. An associated shed and mobile home trailer were located adjacent to the southwest of the structure. Greenhouses were present to the south of the living quarters.

The concrete-floored, wood framed and metal-sided boiler structure was located near the northwestern corner of the property, near the middle road (Figure 3). The natural gas fueled, metal boiler tank was mounted on a metal stand; a metal water return tank was located adjacent to the east. The southern side of the boiler structure contained a single roomed living quarters. A 5-gallon bucket of apparent gear lube was observed on the south side of the boiler structure. The greenhouses were located adjacent to the east of the boiler structure. Mr. Tuck Lin reported that the greenhouses were currently used to grow mushrooms. No pesticides were reportedly used on the mushrooms within the greenhouses. The greenhouses appeared to be in poor condition and some areas had collapsed.

Two active water supply wells, one reportedly inactive water supply well, and an apparent water AST were observed on the southern portion of the property along Alviso-Milpitas Road (Figure 3). One of the water supply wells was located approximately 40 feet west of the 1515-K Alviso-Milpitas Road living quarters structure; metal and PVC piping ran from the well to the apparent water AST which was located approximately five feet to the north of the well. The second active water supply well was located approximately 50 feet west of the first. The well had metal and PVC piping extending to the apparent water tank. The inactive water supply well was observed approximately 25 feet south of the un-numbered living quarters located along Alviso-Milpitas Road. The apparent well was located adjacent to a 4-foot by 4-foot wooden shed that contained two empty 55-gallon drums. No cover was observed on the well; a tape measure was used to determine that the well was open to a depth greater than 25 feet.

The wood framed and fiber sided greenhouses were located adjacent to the north of the 1515-K Alviso-Milpitas Road living quarters and adjacent to the south of the 1515-G Alviso-Milpitas Road living quarters. The greenhouses were in poor condition and several sections of the roof of the greenhouses had collapsed. Systems containing 1-inch diameter metal piping (pesticide/fertilizer system), 3-inch-diameter metal piping (steam system), and 1-inch PVC piping (irrigation system) ran along the ceiling of the greenhouses.

2.3.8 1515-H Alviso-Milpitas Road (Loo Property)

The approximately 5-acre property was developed with a wood-framed and concrete-block structure containing three bedrooms which did not appear to have been occupied within the past year. A water tank and pesticide mixer were located to the east of the living quarters. The pesticide mixer and water tank were located within a structure frame (the walls and roof were not present on the framework) adjacent to the east of the living quarters. Ms. Elizabeth Lin reported that the building contained a natural gas fueled boiler at one time. An apparent water AST was located to the east of the pesticide mixer.

Greenhouses were located to the north and east of the 1515-H Alviso-Milpitas Road structure. The greenhouses were in poor condition and several portions of the roof had collapsed; the greenhouses did not appear to be in operation. A pole-mounted transformer was observed adjacent to the north of the greenhouses.

2.3.9 1515-L Alviso-Milpitas Road (Lau Property)

The approximately 12.3-acre property contained the Lau Brother's Nursery greenhouses located on the east side of the middle road (Figure 3). An approximately 8,000-square-foot, wood framed and metal-sided boiler structure contained a natural gas fed boiler, an above ground water tank, an agricultural chemical mixer, vegetable coolers, and living quarters. The boiler was located within the center of the structure, and the agricultural chemical mixer was located north of the boiler tank inside the structure. Approximately twenty 50-pound bags of fertilizer and two 55-gallon drums of liquid fertilizer (approximately half-full) were stored on the concrete flooring of the structure near the boiler tank. The vegetable coolers (still in use) occupied the western portion of the structure. Vegetables harvested from the greenhouses on the property were reportedly stored in the vegetable cooler prior to distribution. The eastern end of the structure contained living quarters consisting of approximately five bedrooms and three bathrooms.

Ms. Elizabeth Lin and Mr. Wilson Doe reported that a diesel UST was located on the southern side of the boiler structure (Figure 3). A vent pipe apparently associated with the UST was observed on the southern side of the boiler structure.

A wood framed and metal-sided cooler structure was located to the south of the boiler structure. The structure appeared to be used for storage of vegetables after harvesting.

A storage yard area was observed to the south and west of the boiler structure and contained a semi-trailer, a camping trailer, a vehicle, and domestic debris including wood crates, clothing, and trash. An inactive agricultural well reportedly exists near the existing greenhouse structures. The well was not observed during our site visit, however.

2.4 Site Vicinity Reconnaissance

To evaluate adjacent land use, we performed a drive-by survey. Our observations are presented in Table 2. Of the facilities listed in Table 2, Cilker Orchards and the road construction yard may use, handle, and/or store hazardous materials

Table 2. Adjacent Properties

Land Use	Business Name and Address	Direction from Site
Agricultural	Cilker Orchards 1595 Alviso-Milpitas Road	North
Alviso-Milpitas Road, industrial	Road construction storage yard	South
Agricultural, residential, commercial	Cilker Orchards/Silva Produce/Pacheco Tractor Service/Williams Trucking 1595 Alviso-Milpitas Road Raul Ivarra residence 1591 Alviso-Milpitas Road	East
Vacant	buffer zone for San Jose-Santa Clara Water Pollution Control Plant	West

The treatment plant portion of the San Jose-Santa Clara Water Pollution Control Plant is located approximately 1,600 feet west of the site. The plant uses, handles, and stores large quantities of hazardous materials, including chlorine and sulfur dioxide gasses.

2.5 Interviews

During our March 23, 2000 site visit, we contacted Ms. Elizabeth Lin, Mr. Wilson Doe, and Ms. Lilly Kwong for general information regarding past and current site usage. Ms. Lin, Mr. Doe, and Ms. Kwong were asked to complete a questionnaire. Questionnaires were sent to Mr. Norman E. Matteoni, Esq. (representing Tuck & Elizabeth Lin, Hoo Gee Hom and My Sui Hoo, Hoo Gee Hom Nursery, Inc., Yuk Lun Loo Nursery, Inc., and the United Flower Growers, Inc.), Mr. Gordon Chan (representing Kam Cheong Lau & Pou Leng Ip Lau and Kam Wo Lau and Lily L. Lau), and Mr. Thomas Huen (representing Chung Tim Wong & Yin Yi Wong and Harry Kwong & Lily Kwong). Copies of the completed questionnaires received by Lowney Associates are included in Appendix B. A brief discussion of the questionnaires and conversations with selected individuals is provided below.

Ms. Elizabeth Lin has owned her approximately 10-acre portion of the subject site since October 1978. Ms. Lin informed us of the approximate location of the reported 500-gallon gasoline UST present on the western portion of her property. Ms. Lin reported that the gasoline UST was most likely used to fuel machinery used on the orchard, and the tank has not been used since 1978. The orchard reportedly contained orange, prisimon, apricot, and pear trees. Orchard trees were removed from the area currently occupied by greenhouses on Ms. Lin's property. Ms. Lin reported that the UST resting on the ground surface to the east of her 1515 Alviso-Milpitas Road residence was once used as a back-up fuel supply for the boiler located on her property. The UST was reportedly buried on the east side of the boiler structure currently on the Lin property. The UST surfaced during a flood event which occurred in 1982. Following the flood, the tank was emptied of diesel fuel and placed in its current location.

Ms. Lin reported that a boiler used to be located in the structure adjacent to the east of the 1515-H Alviso-Milpitas Road living quarters structure. Ms. Lin did not know the date that the boiler was removed. Ms. Lin reported that the boiler was fueled by natural gas.

Mr. Wilson Doe reported that minor maintenance of the tractor and nursery vehicles was performed within the garage portion of the 1515-C Alviso-Milpitas Road living quarters structure. The maintenance included oil changes for the vehicles and the waste oil was reportedly picked up for off-site disposal/recycling by the City of San Jose. Mr. Doe identified the location of a 10,000-gallon diesel UST on the Doe property. The tank is reportedly located on the east side of the living quarters on-site. Mr. Doe reported that the UST on the Doe property and the diesel UST present on the Lau Brother's property (1515-L Alviso-Milpitas Road) were installed in approximately 1978. Mr. Doe also reported that an approximately 32-foot by 10-foot concrete slab was present above the 10,000-gallon diesel UST on the Doe property. The slab was poured over the UST after a flood occurred in the site vicinity (approximately 1982) and caused the UST to rise to the surface. At that time, the UST was measured to contain approximately 4,000 gallons of diesel fuel. The Doe's pumped water into the tank to weigh the tank down and aid in anchoring it. The current volume of the diesel fuel in the UST present on the Doe property is unknown.

The boiler on the Doe property (1515-C Alviso-Milpitas Road) was last used in approximately 1992 and very limited nursery activities have existed since that time. Mr. Doe reported that pesticides were used approximately 10 to 20 years ago in the greenhouses to the west of the living quarters. The pesticides were reportedly stored and mixed in the pesticide storage/mixing shed located on the west side of the boiler shed on the Doe property (Figure 3). Mr. Doe reported that the property gets its water from the well located on the southern portion of the 55-acre project site near the 1515-K Alviso-Milpitas Road living quarters (Figure 3), Mr. Doe reported that the water line (along with the natural gas line) runs up the middle road; the water line is located along the west side of the middle road, while the natural gas line runs along the east side of the middle road.

According to the questionnaire completed by Mr. Tim Wong (co-owner of the 1515-D Alviso-Milpitas Road property), the greenhouses on the property are used to grow flowers. Agricultural chemicals such as Subdue, Neemazda, and Orthene historically have been applied to the site.

Ms. Lily Kwong reported that the pesticide use at the 1515-E Alviso-Milpitas Road property included Avid, Diazinon AG 500, Dylox, Fore, and Orthene. Pesticide use stopped in approximately 1998.

According to the questionnaire completed by Mr. Kam Wo Lau, Ms. Lily L. Lau, Mr. Kam Cheong Lau, and Mr. Pou Leng Ip Lau, the Lau Brother's Nursery (1515-L Alviso-Milpitas Road) has three structures totaling approximately 9,500 square feet. Chinese vegetables were reportedly grown in the greenhouses on the property. The co-owners reported that no agricultural chemicals were historically applied to

the site. The Lau's reported that the site contained the following: above ground storage tanks (for water), an agricultural well, a boiler, chemical storing and mixing areas, a sump, and an underground storage tank (UST).

3.0 HISTORICAL REVIEW

To evaluate the site history, we reviewed the following.

- Available stereo-paired aerial photographs (1963, 1966, and 1968) from the USGS Library in Menlo Park, California.
- Available USGS 15-minute and 7.5-minute topographic maps (1961, 1968, 1973, and 1980).
- Historic Sanborn fire insurance maps were requested from Sanborn Mapping and Geographic Information Service (Sanborn GIS) in Pelham, New York. Information obtained by us during the study indicated that no Sanborn maps were available.

Our observations are summarized below.

1961 through 1973: Based on the 1961 USGS topographic map, the site appeared to be developed with an orchard and residence. The site appeared to remain similar through at least 1973.

Based on the 1961 topographic map, the properties adjacent to the north and south of the site were developed with orchards. The property adjacent to the west of the site was vacant land. The property adjacent to the east was developed with a residence, an orchard, and associated barn structures. Based on the 1963 aerial photograph, the adjacent properties appeared similar, with the exception of the property adjacent to the south; this property had been cleared of the former orchard and a structure was present on the southeastern corner of the property. Highway 237 also was present to the south. The adjacent properties appeared to remain similar through at least 1973.

1980: Based on the 1980 topographic map, the site appeared to have been cleared of all former orchards and was developed with the existing nursery facility. A residence remained on the southwestern portion of the site. The adjacent properties appeared similar to the prior maps and photographs.

4.0 REGULATORY RECORDS

4.1 City and County Agencies File Review

To obtain information on hazardous materials usage and storage, we reviewed readily available information at the Santa Clara County Building Department (SCCBD), San Jose Fire Department (SJFD), and Santa Clara County Environmental Health Department (SCCEHD) pertaining to the 1515 Alviso-Milpitas Road address.

No files were available at the SJFD or the SCCEHD. A 1994 electrical permit for the 1515 Alviso-Milpitas Road address was the only document made available to us by the SCCBD.

We additionally reviewed a well location map from the Santa Clara Valley Water district (SCVWD). Several wells are shown on the map. A copy of the map is provided in Appendix B.

4.2 Regulatory Agency Database Report

During this study, a regulatory agency database report was obtained and reviewed to help establish whether contamination incidents have been reported within the site vicinity. A list of the database sources reviewed, a detailed description of the sources, and a radius map indicating the location of the reported facilities relative to the project site are presented in Appendix C. Nearby reported hazardous materials incidents and facilities are presented in Table 3.

Table 3. Nearby Hazardous Materials Incidents and Facilities

Facility Name	Map ID No.	Address	Distance and Direction From Site	Potential Concern
Cilker Orchard #3	10	1595 Alviso-Milpitas Road San Jose, CA	Adjacent to the east	The site was reported to have a 3,000-gallon gasoline UST and ground water monitoring well.
AT&T Farms/ McCarthy Ranch	2, 7	Coyote Creek Reach 3/Highway 237 Milpitas, CA	Unknown*	Listed in SMS R_2 and SLIC databases of ground water pollution cases; no further information provided. RWQCB listed as lead agency.

* Although mapped on the site, this facility was not identified/observed on-site or adjacent to the subject property during the site and vicinity reconnaissance.

During interviews with Mr. Cilker, the owner of the adjacent property to the east, he was unaware of the AT&T Farms/McCarthy Ranch facility being anywhere near his property. It is suspected that this site was mislocated on the database report.

5.0 CONCLUSIONS

5.1 Historical Summary

The site's first developed use appears to have been with orchards from at least the early 1960s through the mid- to late 1970s. By 1980, the site was developed with the existing nursery facility and residences. Site information dating back prior to 1961 was unavailable from the sources researched, but based on our experience in this area, site use prior to 1961 was likely agricultural and/or undeveloped land.

5.2 Agricultural Wells

Four water supply wells were observed on the site; three on the 1515-G & 1515-K Alviso-Milpitas Road property and one on the 1515 & 1515-A Alviso-Milpitas Road property. A fifth well was reported, but not observed, to be present at the Lau property (1515-L Alviso-Milpitas Road). The five on-site water supply wells should be properly abandoned in accordance with SCVWD requirements if continued use is no longer intended.

One potential additional well (M6) was identified on the SCVWD well location map (Appendix B). The SCVWD should be contacted to evaluate the status of all wells at the site. If any additional wells are found to exist and are no longer needed, they should be properly destroyed following SCVWD guidelines.

5.3 On-Site Soil Quality

Due to the agricultural history of the site, a potential environmental concern is the possible presence of residual pesticides and associated metals (arsenic, lead, and mercury) in the native soils. Based on the planned use of the site, we do not consider these pesticides, if present, a significant threat to the future occupants of the site. The site will be largely capped by the commercial development and associated asphalt-concrete drives and parking areas; thus, risk to human health and the environment will be significantly reduced if residual pesticides are present. Construction worker health and safety issues and off-site disposal of excess soil, however, can be concerns if high pesticide levels are present. Soil sampling should be performed to evaluate if elevated concentrations of pesticides and associated metals are present throughout the greenhouse areas, and in the pesticide storage and mixing sheds.

5.4 Storage Tanks

The California Code of Regulations requires that all underground storage tanks used for hazardous substances be closed if they are not in use. Temporary closure requirements apply if the tank will be used within 12 months. The application for temporary closure must be submitted within 90 days from the date of last use. Permanent closure (usually removal) is required if the tank will not be used within 12 months.

The gasoline UST located at the Lin property and the two diesel USTs present at the Doe and Lau properties should be removed. Additionally, the approximately 10,000-gallon UST resting on the ground surface to the east of the 1515 Alviso-Milpitas Road residence should be removed from the site for proper disposal or recycling.

A soil and ground water quality evaluation should be conducted at each of the current UST locations as well as at the former location of the tank that is currently resting at the ground surface.

5.5 Asbestos

Due to the construction of the on-site structures prior to 1980, asbestos-containing materials (ACMs) may be present. Since demolition of the buildings is under consideration, an asbestos survey must be conducted under National Emissions Standards for Hazardous Air Pollutants (NESHAP) guidelines. In addition, NESHAP guidelines require that all potentially friable ACM be removed prior to building demolition or renovation that may disturb the ACM.

5.6 Lead-Based Paint

The on-site structures also should be evaluated for the presence of lead based paint prior to demolition. If the lead based paint is still bonded to the building components, its removal is not required prior to demolition. However, the personnel conducting the demolition must comply with the training, worker protection, and monitoring requirements of the California Occupational Safety and Health Administration (Cal/OSHA) Lead in Construction Standard, Title 8, California Code of Regulations (CCR) 1532.1. If the lead based paint is peeling, flaking or blistered, it should be removed prior to demolition. It is assumed that such paint will become separated from the building components during demolition activities; thus, it must be managed and disposed as a separate waste steam.

5.7 Potential Environmental Concerns Within the Site Vicinity

The regulatory agency database report identified the AT&T/McCarthy Ranch facility as being on or near the site. The owner of the adjacent property, Mr. Cilker, has no knowledge of this facility or where it may be located. The location of this site on the database report appears to be mislabeled. The RWQCB should be contacted to help locate this site if additional information is desired.

The San Jose-Santa Clara Water Pollution Control Plant is located within approximately 1,600 feet west of the project site. Consideration should be given to reviewing the facility's risk management plan to evaluate whether the project site falls within the radius of influence for gas releases from the plant.

5.8 Urban Runoff Pollution Prevention Program

The Urban Runoff Pollution Prevention Program, also called the Non-Point Source Program, was developed in accordance with the requirements of the 1986 San Francisco Bay Basin Water Quality Control Plan to reduce water pollution associated with urban storm water runoff. This program was also designed to fulfill the requirements of the Federal Clean Water Act, which mandated that the EPA develop National Pollution Discharge Elimination System (NPDES) permit application requirements for various storm water discharges, including those from municipal storm drain systems and construction site. For properties of 5 acres or greater, a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) must be prepared prior to commencement of construction.

5.9 Septic Tanks

The on-site structures are reported to have septic systems. Prior to site grading activities, the systems should be properly abandoned in accordance with county health department requirements.

6.0 LIMITATIONS

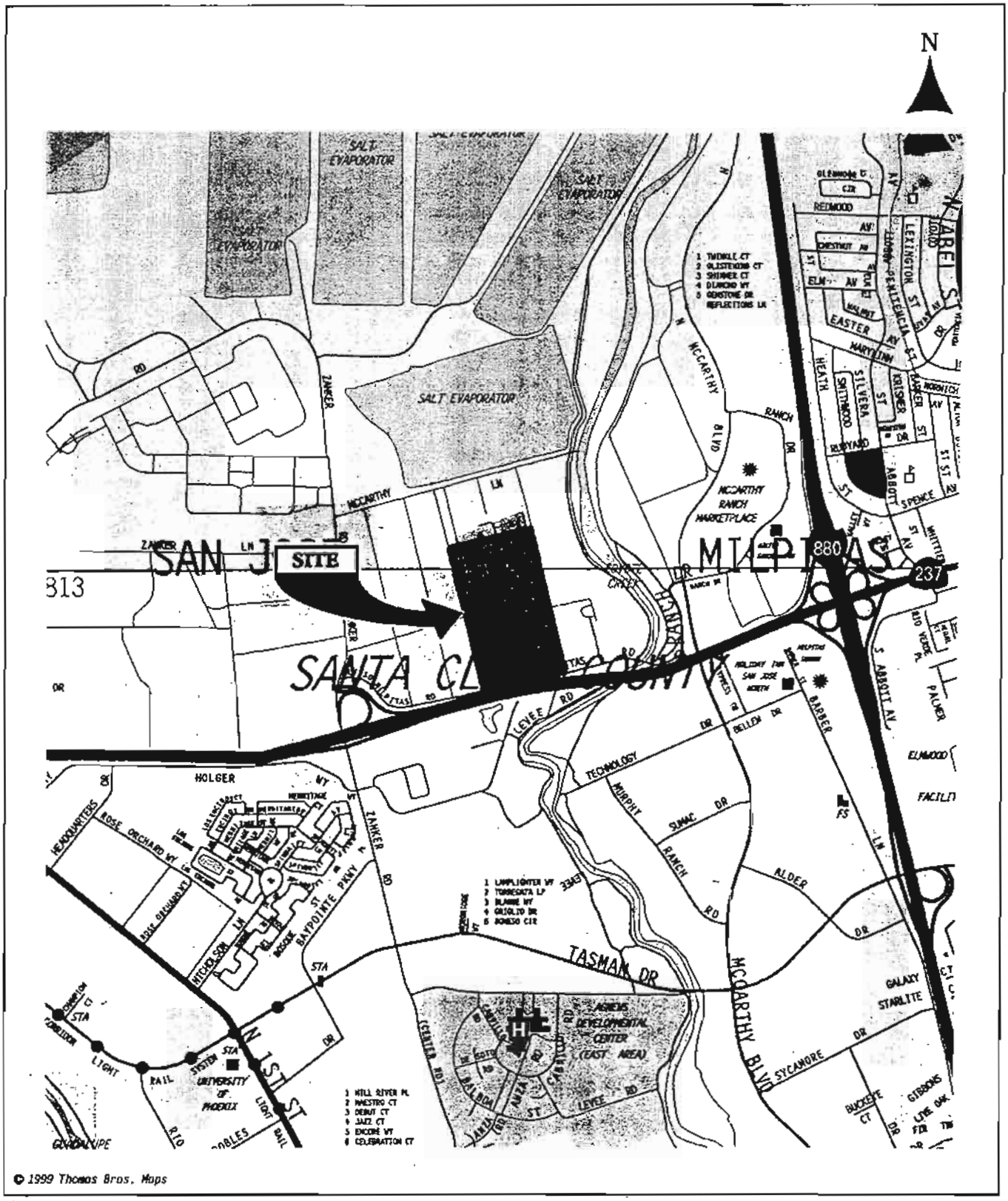
As with all site assessments, the extent of information obtained is a function of client demands, time limitations, and budgetary constraints. Our conclusions and recommendations regarding the site are based on readily observable site conditions, review of readily available documents, maps, aerial photographs, and data collected and/or reported by others. We are not responsible for the accuracy of information or data presented by others. Our conclusions and recommendations in this site assessment are qualified in that no soil, ground water, air, or building material analyses were performed. Sampling and analysis lead to a more reliable assessment of environmental conditions, conditions which often cannot be noted from typical Phase I activities. Should you desire a greater degree of confidence, these samples should be obtained and analyzed to further evaluate environmental conditions.

This report was prepared for the sole use of Calpine. We make no warranty, expressed or implied, except that our services have been performed in accordance with environmental principles generally accepted at this time and location.

7.0 REFERENCE

Lowney Associates. February 15, 2000. *Phase I Environmental Site Assessment.*

* * * * * * * * * * * * * * *



VICINITY MAP

HIGHWAY 237/COYOTE CREEK 55-ACRE PARCEL

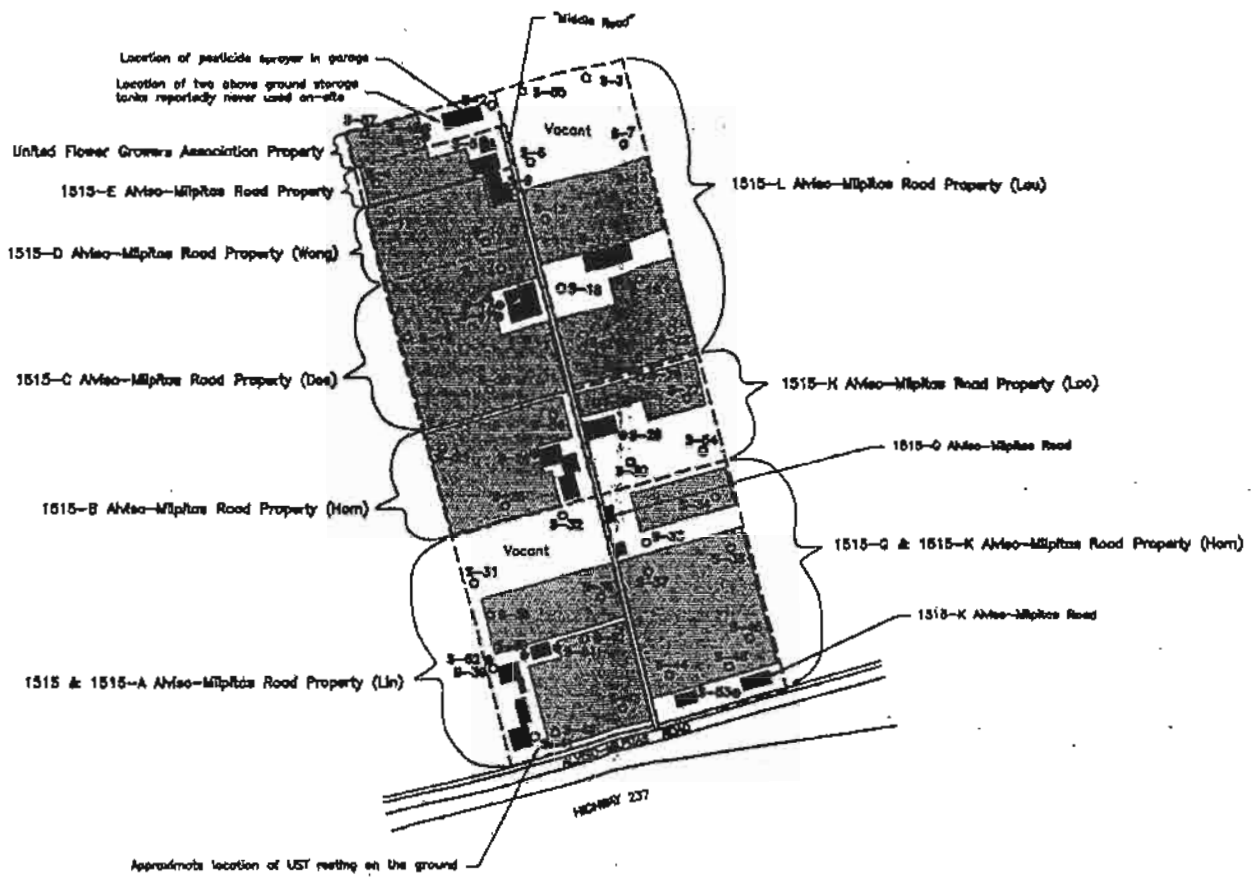
San Jose, California

LOVNEY ASSOCIATES

Environmental/Geotechnical/Engineering Services

FIGURE 1

587-12D



LEGEND

O – Approximate location of greenhouse area/former agricultural area soil sample

● – Approximate location of pesticide mixing/storage area soil sample and/or ground water sample (if applicable)

▒ – Approximate location of on-site greenhouse/nursery

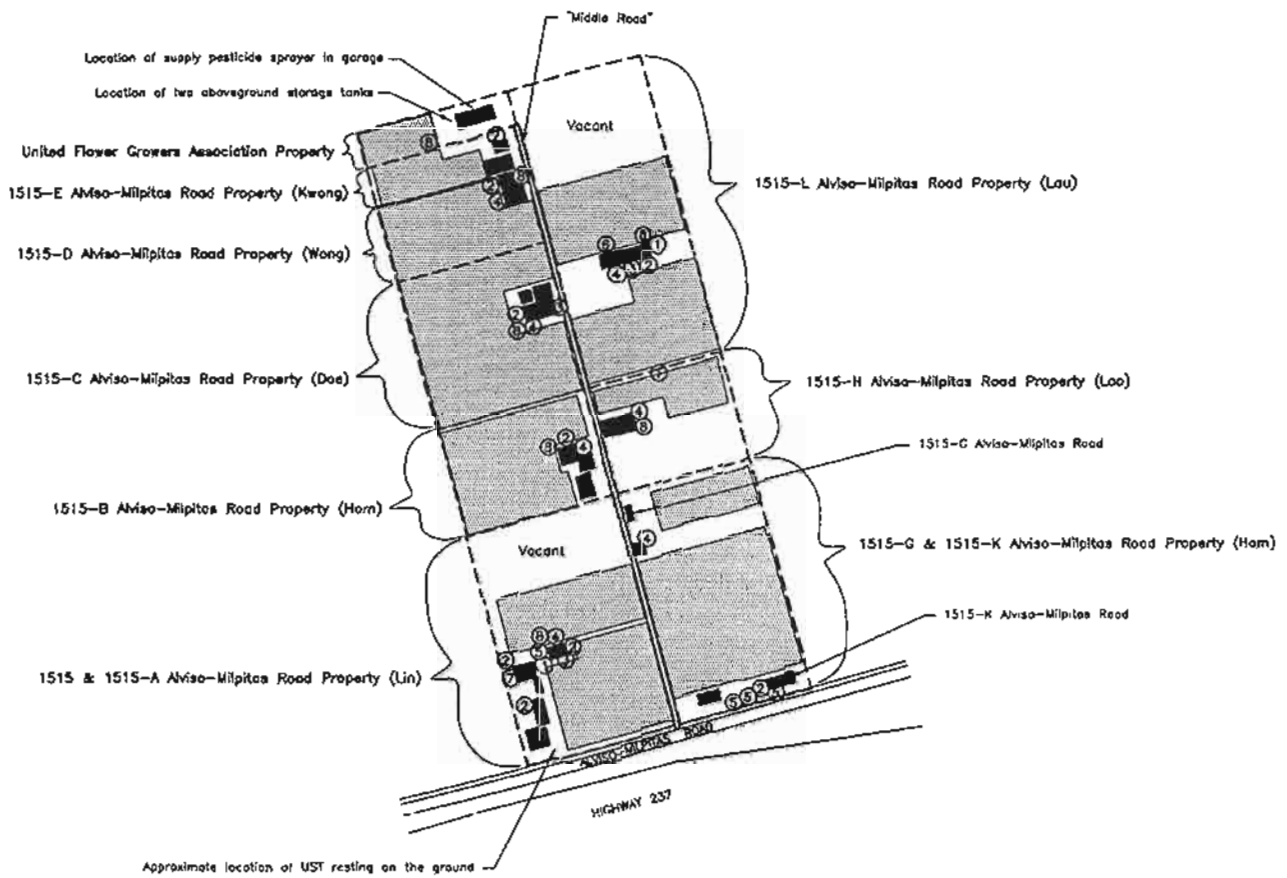
■ – Approximate location of on-site structures

Base by Unknown.

SITE PLAN
55-ACRE LIN/HOM PROPERTY
San Jose, California

LOVNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

FIGURE 2
687-127



LEGEND

① – Approximate location of pole–mounted transformer
② – Approximate location of pesticide storage shed
③ – Approximate location of diesel UST
④ – Approximate location of boiler
⑤ – Approximate location of water supply well observed by Lowney Associates
⑥ – Approximate location of water supply well reported by others but not observed by Lowney Associates
⑦ – Approximate location of gasoline UST
⑧ – Approximate location of agricultural chemical mixer

– Approximate location of on–site greenhouse/nursery

– Approximate location of on–site structures

Base by Unknown.

SITE PLAN
HIGWAY 237/COYOTE CREEK 55–ACRE PARCEL
San Jose, California

LOWNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

FIGURE 3
587–12D

Appendix B
Phase II ESA – Lowney Associates - July 14, 2000, with supplemental soil quality evaluation report July 20, 2000

Los Esteros Critical Energy Facility

Appendix 8.14-B
Phase II Soil and Groundwater Quality Evaluation

December 2003

LOWNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

Phase II Soil and Ground Water

Quality Evaluation

55-acre Lin/Hom parcel

San Jose, California

This report has been prepared for:

Calpine

620 Coolidge Drive, Suite 200, Folsom, California 95630

July 14, 2000

Project No. 587-12F

James P. Kiernan
Staff Environmental Engineer

Stason I. Foster, P.E.
Senior Principal Engineer

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TABLE OF CONTENTS

PHASE II SOIL AND GROUND WATER QUALITY EVALUATION

55-ACRE LIN/HOM PARCEL

SAN JOSE, CALIFORNIA

1.0 INTRODUCTION

1.1 Purpose

In this report, we present the results of the soil and ground water quality evaluation performed at the 55-acre Lin/Hom parcel located in San Jose, California (Figure 1). This work was performed for Calpine who is considering purchasing the property for com-mercial development.

1.2 Site Background

The approximately 55-acre parcel is located near the northwest intersection of Highway 237 and Coyote Creek. The site is located in an agricultural, residential, and commercial area and is bounded by McCarthy Lane to the north; Alviso-Milpitas Road to the south; agricultural, residential, and commercial property to the east; and vacant land to the west (Figure 2). This parcel currently is being used for various agricultural farming purposes.

The site is developed with several nursery/greenhouse complexes and residential structures. As discussed in our Phase I Environmental Site Assessment reports dated February 13, 2000 and April 13, 2000 (draft), underground storage tanks (USTs) (three diesel fuel tanks and one gasoline tank), and several pesticide mixing/storage areas were identified on-site (Figure 2). These areas, coupled with former agricultural use of the property, prompted the performance of this phase of work to evaluate soil and ground water quality.

1.3 Scope of Work

The scope of work performed was outlined in our agreement with you, dated April 26, 2000, and included the following tasks.

- Drilling of exploratory borings near the USTs and pesticide mixing/storage areas, and from the greenhouse/agricultural areas.
- Collection of soil and ground water samples for laboratory analysis.

2.0 SOIL AND GROUND WATER QUALITY EVALUATION

To evaluate soil and ground water quality near the former USTs, the pesticide storage and mixing areas, and within the greenhouses located on the parcel, a subsurface investigation was performed on May 9, 10, 11, and 13, 2000. Under the

supervision of Principal Environmental Engineer Stason I. Foster, Environmental Geologist John W. McCain drilled 59 borings to approximate depths between 2½ and 10 feet.

2.1 UST Areas

As shown on Figures 3, 4, and 5, one boring was drilled near each of the existing UST locations. For the diesel UST that reportedly had floated to the ground surface during a flood in approximately 1982, a boring was drilled near the former in-place location to the east of the boiler structure on the Lin property.

Ground water was encountered in three of the four borings at approximate depths of 3 to 4 feet. Soil and ground water sampling protocols are presented in Appendix A.

Soil samples collected from just above the shallow water-bearing zone and ground water grab samples (where encountered) from each boring, were selected for submittal to a state-certified analytical laboratory.

The samples were analyzed for total petroleum hydrocarbons as gasoline and diesel (TPHg and TPHd) (EPA Test Method 8015); benzene, toluene, ethylbenzene, and total xylenes (BTEX) (EPA Test Method 8020); and fuel oxygenates (EPA Test Method 8260). The ground water samples additionally were analyzed for organochlorine pesticides (EPA Test Method 8081). These analyses were selected to help evaluate possible contamination due to the presence of the USTs. The results of these analyses are presented in Tables 1 and 2. Copies of the analytical reports and chain of custody documentation are presented in Appendix A.

Table 1. Analytical Results of Selected Soil Samples – UST Area
(concentrations in parts per million)

Boring Number	Depth (feet)	TPHg	TPHd	BTEX	Fuel Oxygenates
T-1	2½ - 3	<1.0	<1.0	<0.005	<0.005
T-2	2½ - 3	<1.0	<1.0	<0.005	<0.005
T-3	9½ - 10	<1.0	<1.0	<0.005	<0.005
T-4	2½ - 3	<1.0	<1.0	<0.005	<0.005

< Indicates that the compound was not detected at or above the stated laboratory reporting limit

Table 2. Analytical Results of Selected Ground Water Samples-UST Area
(concentrations in parts per million)

Well Number	Date	TPHg	TPHd	BTEX	Fuel Oxygenates	Organochlorine Pesticides
T-1	5/11/00	<50	<50	<0.5	<5	ND
T-2	5/11/00	<50	<50	<0.5	<5	ND
T-4	5/11/00	<50	<50	<0.5	<5	ND

< Indicates that the compound was not detected at or above the stated laboratory reporting limit
ND – Not Detected (detection limits vary)

2.2 Greenhouses and Pesticide Storage/Mixing Areas

2.2.1 Soil Quality

Fifty-five soil samples were collected at a depth of approximately ½ foot from the borings drilled near the greenhouses and the pesticide storage and mixing areas. These samples were analyzed for organochlorine pesticides (EPA Test Method 8081) and the metals mercury, arsenic, selenium, and lead. The pesticide and metals results are presented in Tables 3 and 4, respectively. Sampling locations are shown on Figure 6.

Table 3. Analytical Results of Selected Soil Samples – Organochlorine Pesticides
(concentrations in parts per million)

Boring Number	Depth (feet)	DDT	DDE	DDD	Dieldrin	Heptachlor Epoxide	Endo-sulfan I	Endo-sulfan II	Endrin	Toxaphene
S-1	0 - ½	0.328	1.52	<0.100	<0.100	<0.050	<0.050	<0.100	<0.100	<4.25
S-2	0 - ½	0.328	1.54	<0.100	<0.100	<0.050	<0.050	<0.100	<0.100	<4.25
S-3	0 - ½	0.363	1.83	<0.200	<0.200	<0.100	<0.100	<0.200	<0.200	<8.50
S-4	0 - ½	0.181	1.55	<0.100	<0.100	<0.050	<0.050	<0.100	<0.100	<4.25
S-5	0 - ½	0.049	0.236	<0.020	<0.020	<0.010	<0.010	<0.020	<0.020	<0.850
S-6	0 - ½	0.483	1.80	<0.200	<0.200	<0.100	<0.100	<0.200	<0.200	<8.50
S-7	0 - ½	0.142	1.10	<0.080	<0.080	<0.040	<0.040	<0.080	<0.080	<3.40
S-9	0 - ½	0.127	0.699	<0.080	<0.080	<0.040	<0.040	<0.080	<0.080	<3.40
S-10	0 - ½	0.083	0.806	<0.080	<0.080	<0.040	<0.040	<0.080	<0.080	<3.40
S-11	0 - ½	0.047	0.551	<0.040	<0.040	<0.020	<0.020	<0.040	<0.040	<1.70
S-12	0 - ½	0.121	0.865	<0.080	<0.080	<0.040	<0.040	<0.080	<0.080	<3.40
S-13	0 - ½	0.251	1.07	<0.100	<0.100	<0.050	<0.050	<0.100	<0.100	<4.25
S-14	0 - ½	0.207	1.27	<0.080	<0.080	<0.040	<0.040	<0.080	<0.080	<3.40
S-15	0 - ½	<0.2	0.379	<0.200	<0.200	<0.100	<0.100	<0.200	<0.200	<8.50
S-16	0 - ½	0.088	0.740	<0.040	<0.040	<0.020	<0.020	<0.040	<0.040	<1.70
S-17	0 - ½	0.083	0.347	<0.040	<0.040	<0.020	<0.020	<0.040	<0.040	<1.70
S-18	0 - ½	0.344	1.20	<0.080	<0.080	<0.040	<0.040	<0.080	<0.080	<3.40
S-19	0 - ½	0.163	0.914	<0.100	<0.100	<0.050	<0.050	<0.100	<0.100	<4.25

continued

Table 3. Analytical Results of Selected Soil Samples – Organochlorine Pesticides

(concentrations in parts per million)
(continued)

Boring Number	Depth (feet)	DDT	DDE	DDD	Dieldrin	Heptachlor Epoxide	Endo-sulfan I	Endo-sulfan II	Endrin	Toxaphene
S-20	0 - ½	<0.04	0.481	<0.04	<0.04	<0.02	<0.02	<0.04	<0.04	<1.7
S-21	0 - ½	0.066	<0.04	<0.04	<0.04	0.498	<0.02	<0.04	<0.04	<1.7
S-22	0 - ½	0.115	0.635	<0.04	<0.04	<0.02	<0.02	<0.04	<0.04	<1.7
S-23	0 - ½	0.305	3.09	<0.2	<0.2	<0.1	<0.1	<0.2	<0.2	<8.5
S-24	0 - ½	8.66	1.1	1.27	<0.4	0.389	1.75	<0.4	<0.4	<17
S-25	0 - ½	<0.1	1.01	<0.1	<0.1	<0.05	<0.05	<0.1	<0.1	<4.25
S-26	0 - ½	<0.2	1.73	<0.2	<0.2	<0.1	<0.1	<0.2	<0.2	<8.5
S-27	0 - ½	<0.16	0.949	<0.16	<0.16	<0.04	<0.04	<0.16	<0.16	<3.4
S-28	0 - ½	0.323	1.62	<0.08	<0.08	<0.04	<0.04	<0.08	<0.08	<3.4
S-29	0 - ½	0.023	0.141	0.0094	<0.008	<0.004	<0.004	<0.008	<0.008	<0.34
S-30	0 - ½	0.092	1.02	0.064	<0.08	<0.04	<0.04	<0.08	<0.08	<3.4
S-31	0 - ½	1.78	<0.2	<0.2	<0.2	<0.1	<0.1	<0.2	<0.2	<8.5
S-32	0 - ½	0.045	0.398	<0.04	<0.04	<0.02	<0.02	<0.04	<0.04	<1.7
S-33	0 - ½	0.117	0.454	<0.04	<0.04	<0.02	<0.02	<0.04	<0.04	<1.7
S-34	0 - ½	0.092	0.74	0.044	<0.04	<0.02	<0.02	<0.04	<0.04	<1.7
S-35	0 - ½	0.084	0.644	<0.04	<0.04	<0.02	<0.02	<0.04	<0.04	<1.7
S-36	0 - ½	<0.04	0.642	<0.04	<0.04	<0.02	<0.02	<0.04	<0.04	<1.7
S-37	0 - ½	0.134	0.476	0.049	<0.04	<0.02	<0.02	<0.04	<0.04	<1.7
S-38	0 - ½	0.067	0.304	0.035	<0.004	<0.002	<0.002	<0.004	<0.004	<0.17
S-39	0 - ½	0.0049	0.018	0.013	<0.004	<0.002	<0.002	<0.004	<0.004	<0.17
S-40	0 - ½	0.11	1.63	0.052	<0.04	<0.02	<0.02	<0.04	<0.04	<1.7
S-41	0 - ½	0.393	1.87	0.038	0.019	<0.002	<0.002	<0.004	<0.004	<0.17
S-42	0 - ½	0.175	1.73	0.076	<0.04	<0.02	<0.02	<0.04	<0.04	<1.7
S-43	0 - ½	0.137	1.384	0.039	0.0083	<0.002	<0.002	<0.004	<0.004	<0.17
S-44	0 - ½	0.035	0.205	0.02	<0.004	<0.002	<0.002	<0.004	<0.004	<0.17
S-45	0 - ½	0.308	1.05	0.036	<0.004	<0.002	<0.002	<0.004	<0.004	<0.17
S-46	0 - ½	0.085	0.39	0.0097	<0.004	<0.002	<0.002	<0.004	<0.004	<0.17
S-47	0 - ½	0.013	0.106	<0.008	<0.008	<0.004	<0.004	<0.008	<0.008	<0.34
S-48	0 - ½	<0.5	1.10	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1	<5.0
S-50	0 - ½	0.504	1.45	0.138	<0.1	<0.05	<0.05	<0.1	<0.1	<4.2
S-51	0 - ½	0.271	1.02	0.03	0.017	<0.002	<0.002	<0.004	<0.004	<0.17
S-52*	0 - ½	0.098	0.023	0.014	<0.004	<0.002	<0.002	<0.004	<0.004	12.0
S-53	0 - ½	0.504	1.27	0.085	0.011	<0.002	<0.002	<0.004	<0.004	<0.17
S-54	0 - ½	<0.004	1.51	<0.004	0.01	<0.002	<0.002	0.128	0.062	<0.17
S-55	0 - ½	0.224	1.85	0.056	0.014	<0.002	<0.002	<0.004	<0.004	<0.17
S-56	0 - ½	0.026	0.427	0.035	<0.004	<0.002	<0.002	<0.004	<0.004	<0.17
S-57	0 - ½	0.23	1.99	0.083	0.016	<0.002	<0.002	<0.004	<0.004	<0.17
T-3	9½ -10	<0.004	<0.004	<0.004	<0.004	<0.002	<0.002	<0.004	<0.004	<0.17
T-4	2½ - 3	<0.004	<0.004	<0.004	<0.004	<0.002	<0.002	<0.004	<0.004	<0.17
PRG	--	12.0	12.0	17.0	0.15	0.27	5,300	5,300	260	2.20
TTLC	--	1.0	1.0	1.0	8.0	4.7	NE	NE	0.200	5.0

< Indicates that the compound was not detected at or above the stated laboratory reporting limit
PRG Preliminary Remediation Goal for industrial site use–EPA Region 9, 1999
TTLC Total Threshold Limit Concentration
NE Not Established
* Soil Sample S-52 also contained Alpha-BHC (0.13 ppm), Beta-BHC (0.23 ppm), and Delta-BHC (1.40 ppm)

Table 4. Analytical Results of Selected Soil Samples – Metals

(concentrations in parts per million)

Boring Number	Depth (feet)	Arsenic	Lead	Mercury	Selenium
S-1	0 - ½	32	85	<0.05	<25
S-2	0 - ½	35	87	0.06	<25
S-3	0 - ½	28	85	0.06	<25
S-4	0 - ½	57	140	0.08	<25
S-5	0 - ½	39	110	0.06	<25
S-6	0 - ½	48	140	0.06	<25
S-7	0 - ½	36	110	<0.05	<25
S-9	0 - ½	37	91	0.07	<25
S-10	0 - ½	42	110	0.07	<25
S-11	0 - ½	57	150	0.06	<25
S-12	0 - ½	55	160	<0.05	<25
S-13	0 - ½	42	120	0.1	<25
S-14	0 - ½	56	140	0.11	<25
S-15	0 - ½	19	41	0.07	<25
S-16	0 - ½	58	150	0.08	<25
S-17	0 - ½	50	120	<0.05	<25
S-18	0 - ½	34	79	0.08	<25
S-19	0 - ½	35	89	<0.05	<25
S-20	0 - ½	48	120	0.12	<25
S-21	0 - ½	36	85	0.05	<25
S-22	0 - ½	34	85	0.05	<25
S-23	0 - ½	59	150	0.11	<25
S-24	0 - ½	32	90	<0.05	<25
S-25	0 - ½	50	120	0.13	<25
S-26	0 - ½	49	110	0.12	<25
S-27	0 - ½	51	130	0.13	<25
S-28	0 - ½	49	140	0.1	<25
S-29	0 - ½	51	130	<0.05	<25
S-30	0 - ½	55	120	0.08	<25
S-31	0 - ½	34	88	0.05	<25
S-32	0 - ½	36	76	0.06	<25
S-33	0 - ½	42	130	<0.05	<25
S-34	0 - ½	48	140	0.1	<25
S-35	0 - ½	51	130	0.06	<25
S-36	0 - ½	47	140	<0.05	<25
S-37	0 - ½	56	160	0.07	<25
S-38	0 - ½	42	100	0.05	<25
S-39	0 - ½	28	64	0.07	<25
S-40	0 - ½	43	160	0.12	<25
S-41	0 - ½	46	140	<0.05	<25
S-42	0 - ½	52	170	0.09	<25
S-43	0 - ½	55	180	0.11	<25
S-44	0 - ½	43	130	<0.05	<25

continued

Table 4. Analytical Results of Selected Soil Samples – Metals
(concentrations in parts per million)
(continued)

Boring Number	Depth (feet)	Arsenic	Lead	Mercury	Selenium
S-45	0 - ½	55	180	0.06	<25
S-46	0 - ½	65	170	0.07	<25
S-47	0 - ½	11	<5.0	<0.05	<25
S-48	0 - ½	50	130	<0.05	<25
S-50	0 - ½	53	180	0.09	<25
S-51	0 - ½	46	120	0.06	<25
S-52	0 - ½	67	310	0.6	<25
S-53	0 - ½	45	140	<0.05	<25
S-54	0 - ½	58	140	0.06	<25
S-55	0 - ½	39	94	<0.05	<25
S-56	0 - ½	51	130	0.54	<25
S-57	0 - ½	42	94	<0.05	<25
PRG	--	2.7	1,000	610	10,000
TTLC	--	500	1,000	20	100

< Indicates that the compound was not detected at or above the stated laboratory reporting limit
TTLC Total Threshold Limit Concentration
PRG Preliminary Remediation Goal for industrial site use–EPA Region 9, 1999

In addition, 19 of the shallow soil samples were analyzed for organophosphorous pesticides (EPA Test Method 8141), N-methyl carbamates (EPA Test Method 8318) and chlorinated herbicides (EPA Test Method 8151). The results of these analyses are shown in Table 5. The only two organophosphorous pesticides detected in the samples were chlorpyrifos and parathion. The only chlorinated herbicide detected in the samples was pentachlorophenol. No N-methyl carbamates were detected in any of the samples and therefore not shown in Table 5.

Table 5. Analytical Results of Selected Soil Samples - Organophosphorous Pesticides and Chlorinated Herbicides
(concentrations in parts per million)

Boring Number	Depth (feet)	Chlorpyrifos (Dursban)	Parathion	Pentachlorophenol (PCP)
S-1	0 - ½	<0.03	<0.04	<0.01
S-2	0 - ½	<0.03	<0.04	<0.01
S-4	0 - ½	<0.03	<0.04	<0.01
S-5	0 - ½	<0.03	<0.04	<0.01
S-6	0 - ½	<0.03	<0.04	<0.01
S-10	0 - ½	<0.03	<0.04	<0.01
S-11	0 - ½	<0.03	<0.04	<0.01

continued

Table 5. Analytical Results of Selected Soil Samples - Organophosphorous Pesticides and Chlorinated Herbicides
(concentrations in parts per million)
(continued)

Boring Number	Depth (feet)	Chlorpyrifos (Dursban)	Parathion	Pentachlorophenol (PCP)
S-13	0 - ½	<0.03	<0.04	<0.01
S-14	0 - ½	<0.03	<0.04	<0.01
S-20	0 - ½	<0.03	<0.04	<0.01
S-21	0 - ½	<0.03	<0.04	<0.01
S-23	0 - ½	<0.03	<0.04	<0.01
S-24	0 - ½	0.100	0.06	0.42
S-25	0 - ½	<0.03	<0.04	<0.01
S-29	0 - ½	<0.03	<0.04	<0.01
S-30	0 - ½	<0.03	<0.04	<0.01
S-39	0 - ½	<0.03	<0.04	<0.01
S-47	0 - ½	<0.03	0.06	<0.01
S-51	0 - ½	<0.03	<0.04	<0.01
PRG	–	2,600	5,300	11.0

< Indicates that the compound was not detected at or above the stated laboratory reporting limit
PRG Preliminary Remediation Goal for industrial site use–EPA Region 9, 1999

2.2.2 Ground Water Quality

To evaluate ground water quality, ground water grab samples were collected from six borings drilled near the pesticide storage and mixing areas (S-24, S-29, S-47, S-50, S-51, and S-53) (Figure 6). The ground water samples were analyzed for organochlorine pesticides and the metals mercury, arsenic, selenium, and lead. The results of the metals analysis are presented in Table 6.

Table 6. Analytical Results of Selected Ground Water Samples- Pesticide Storage and Mixing Areas
(concentrations in parts per billion)

Boring Number	Date	Arsenic	Lead	Mercury	Selenium	Organochlorine Pesticides
S-24	5/10/00	<5.0	<15	<0.2	<15	ND*
S-29	5/11/00	<5.0	30	<0.2	<15	ND
S-47	5/11/00	<5.0	<15	<0.2	<15	ND
S-50	5/11/00	<5.0	<15	<0.2	<15	ND
S-51	5/13/00	14	26	<0.2	<15	ND
S-53	5/13/00	<5.0	30	<0.2	<15	ND
MCL	–	50	15**	2.0	50	

< Indicates that the compound was not detected at or above the stated laboratory reporting limit
MCL Drinking water Maximum Contaminant Levels–California DHS, March 12, 1999
ND Not Detected (detection limits vary)
* All non-detect except for Endosulfan I at 0.3 ppb.
** Lead Action Level for drinking water

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 Soil Quality – Pesticides and Metals

The laboratory analyses of soil samples detected various pesticides. The main pesticide detected was DDT and the related compounds DDD and DDE. The sum of these three compounds is commonly referred to as total DDT. Total DDT levels up to 11.03 ppm were detected in one sample; however, in most samples, the total DDT levels ranged from about 0.5 to 2.5 ppm. In about half the samples, the total DDT concentrations were greater than the 1.0 ppm Total Threshold Limit Concentration (TTLC). The TTLC is the level above which a solid waste is considered hazardous per Title 22 of the California Code of Regulations.

None of the total DDT levels detected exceed the preliminary remediation goal (PRG) of 12.0 ppm for industrial site use. The PRGs are risk-based concentrations developed by EPA Region 9 for use as screening levels in determining if further evaluation is warranted, in prioritizing areas of concern, in establishing initial cleanup goals, and in estimation of potential health risks. The PRGs are chemical concentrations that correspond to fixed levels of risk (either a cancer risk of one in one million [10^{-6}] or a non-carcinogenic hazard quotient of one, whichever occurs at a lower concentration).

Since the DDT levels detected do not exceed the PRGs, the concentrations detected do not appear to pose a significant threat to human health in a commercial or industrial setting. If property use were to be changed to a residential setting, additional work likely would be required. Since the site is planned for commercial use and will be largely capped by buildings and associated concrete drives and parking areas, risk to human health and the environment will be significantly reduced.

Heptachlor epoxide was detected in two of the samples at 0.498 and 0.389 ppm. Although above the PRG (0.27 ppm), this compound does not appear to be a significant concern since it was only infrequently detected; thus, significant exposure is unlikely to occur. The levels detected also are well below the TTLC of 4.7 ppm.

Toxaphene was detected in only one sample (S-52). However, the concentration detected (12.0 ppm) is well above the PRG (2.2 ppm) and TTLC (5.0 ppm). Since this sample was collected from a pesticide storage/mixing area and exceeds both the PRG and TTLC, we recommend that additional sampling be performed in this vicinity to evaluate the vertical and horizontal extent of toxaphene-impacted soil.

Lead and arsenic concentrations detected in soil are higher than typical background levels which are commonly less than 50 ppm and less than 10 ppm, respectively. However, the levels detected are well below their respective TTLC values of 1,000 and 500 ppm. As with the residual pesticides, the metal concentrations detected do not appear to pose a significant threat to human health in a commercial/industrial setting.

Due to the presence of residual pesticides and elevated levels of metals, a construction worker health and safety plan should be developed for the earthwork portion of the proposed development.

We also recommend that further testing for arsenic, lead, and organochlorine pesticides be completed on selected deeper soil samples. This additional testing will help confirm that concentrations of target constituents do not increase with depth. Based on our experience, a reduction in concentrations would be expected in the upper few feet of soil.

If on-site soil is to be off-hauled, additional characterization should be performed prior to transport. Total DDT concentrations in the upper ½ foot of soil appear to exceed California's hazardous waste criteria (TTLC of 1.0 ppm). Since off-site disposal of this soil could be costly, we recommend that the planned development be designed to minimize the amount of soil to be exported.

Only two organophosphorous pesticides (chlorpyrifos and parathion) were detected in the soil samples collected. The only chlorinated herbicide detected was pentachlorophenol. The concentrations detected for each of these compounds were well below their respective PRGs for industrial site use. No N-methyl carbamates were detected in any of the soil samples.

3.2 Soil Quality – Petroleum Hydrocarbons

Petroleum hydrocarbons were not detected in the soil samples collected near the existing USTs. We recommend that the USTs be removed in accordance with applicable regulations prior to site development. Although additional soil and ground water sampling will be required as part of the UST removal process, the data collected to date does not indicate that the USTs have significantly impacted the site.

3.3 Ground Water Quality

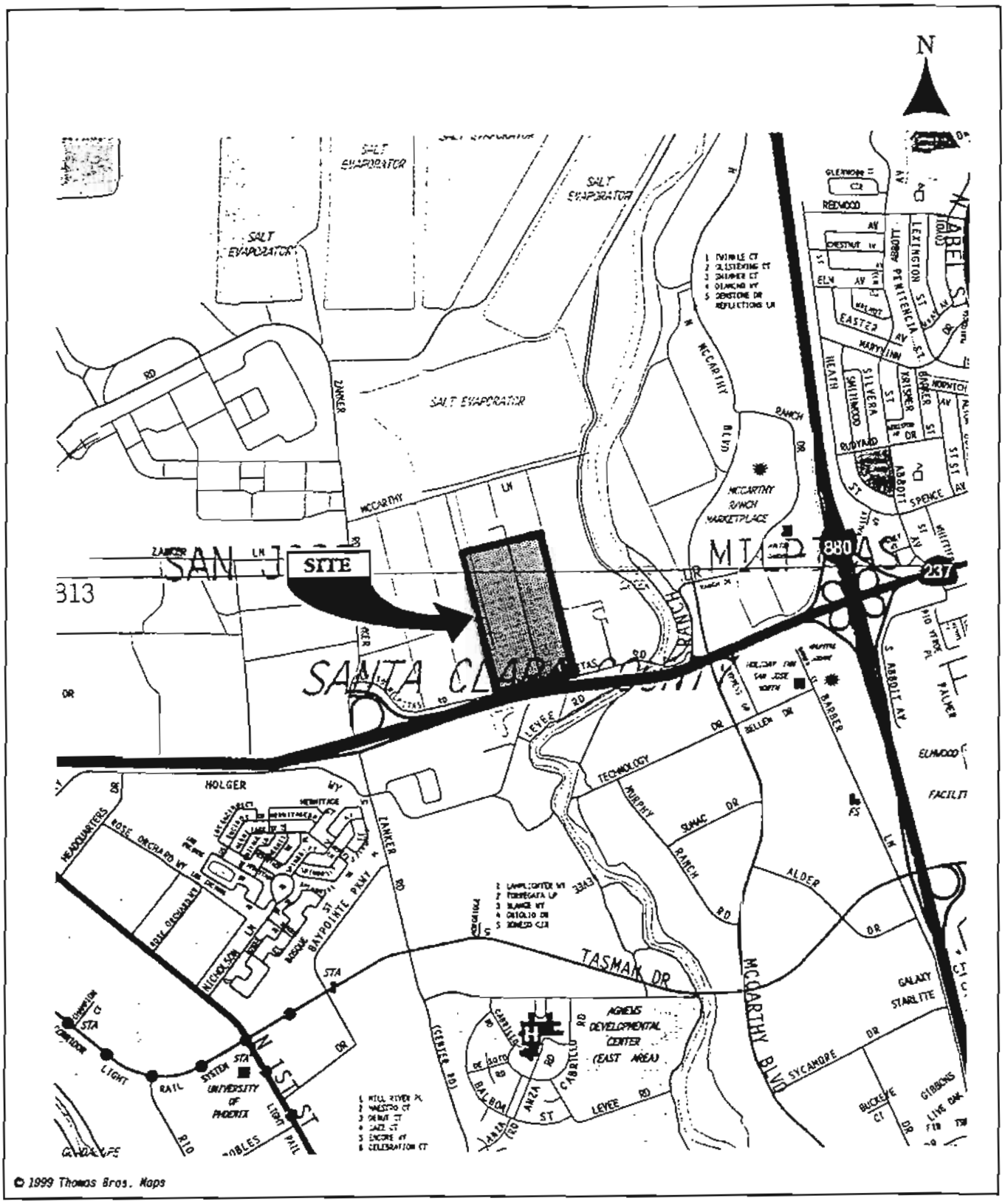
During this investigation, ground water grab samples were collected from nine borings advanced near the USTs and pesticide storage/mixing areas at the site. No significant levels of petroleum hydrocarbons or pesticides were detected in the ground water samples analyzed.

Metal concentrations detected in the ground water samples did not exceed the drinking water maximum contaminant levels (MCLs). Although no MCL has been established for lead, there is an action level of 15 ppb for drinking water at the consumer tap. Lead levels were found to exceed this level in three samples. Since shallow on-site ground water is not proposed as a drinking water source, the lead levels detected do not appear to be a significant concern and may be due to sediments contained in the ground water grab samples.

4.0 LIMITATIONS

This report was prepared for the use of Calpine in evaluating soil and ground water quality at the 55-acre Lin/Hom parcel at the time of this study. We make no warranty, expressed or implied, except that our services have been performed in accordance with environmental principles generally accepted at this time and location. The chemical and other data presented in this report can change over time and are applicable only to the time this study was performed. We are not responsible for the data presented by others.

The accuracy and reliability of geo- or hydrochemical studies are a reflection of the number and type of samples taken and extent of the analyses conducted, and are thus inherently limited and dependent upon the resources expended. Chemical analyses were performed for specific parameters during this investigation, as detailed in the scope of services. Please note that additional constituents not analyzed for during this evaluation may be present in soil and ground water at the site. Our sampling and analytical plan was designed using accepted environmental principles and our judgment for the performance of a soil and ground water quality evaluation and was based on the degree of investigation approved by you. It is possible to obtain a greater degree of certainty, if desired, by implementing a more rigorous soil and ground water sampling program or evaluating the risk posed by the contaminants detected, if any.



VICINITY MAP

55-ACRE LIN/HOM PROPERTY

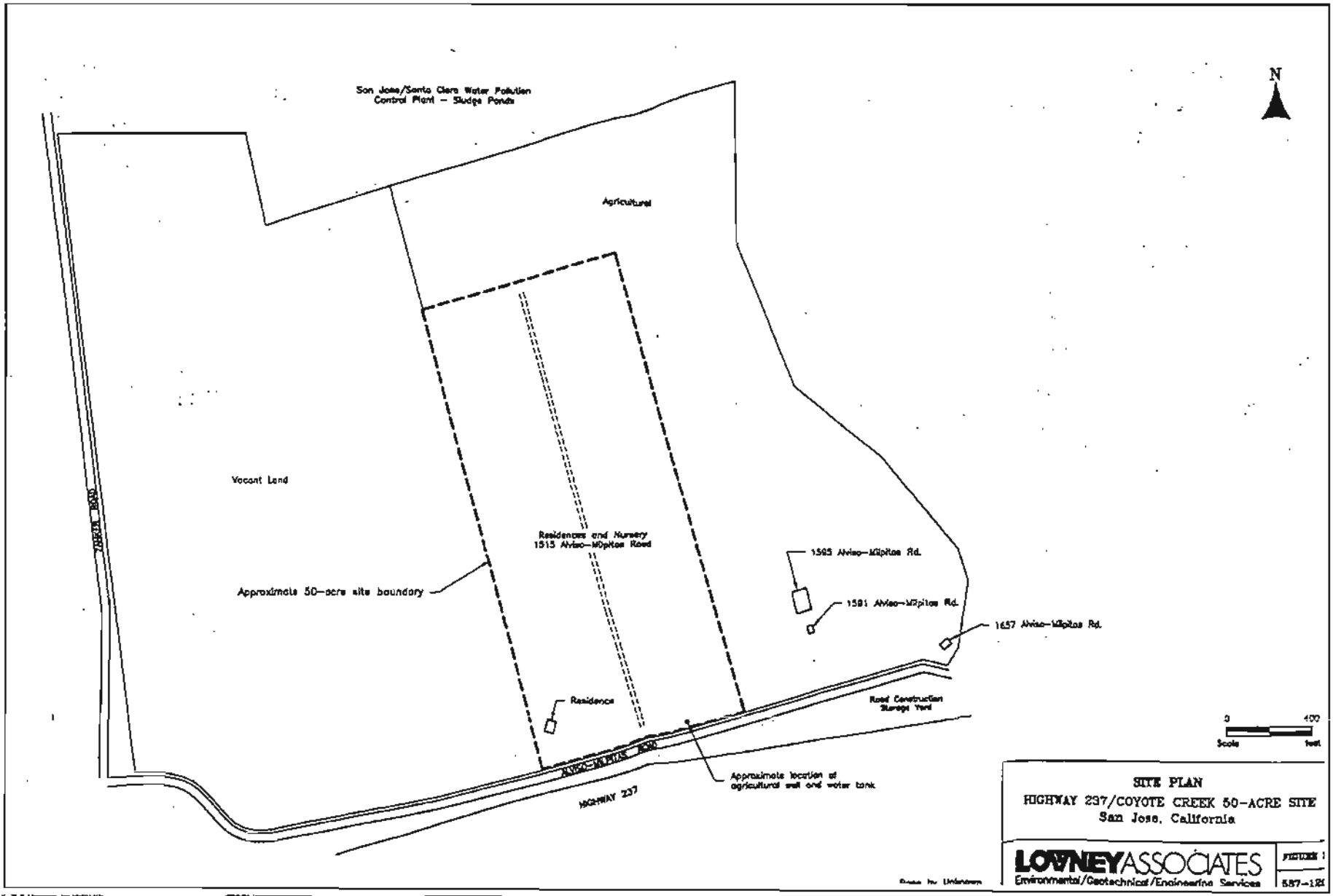
San Jose, California

LOVNEY ASSOCIATES

Environmental/Geotechnical/Engineering Services

FIGURE 1

587-12F

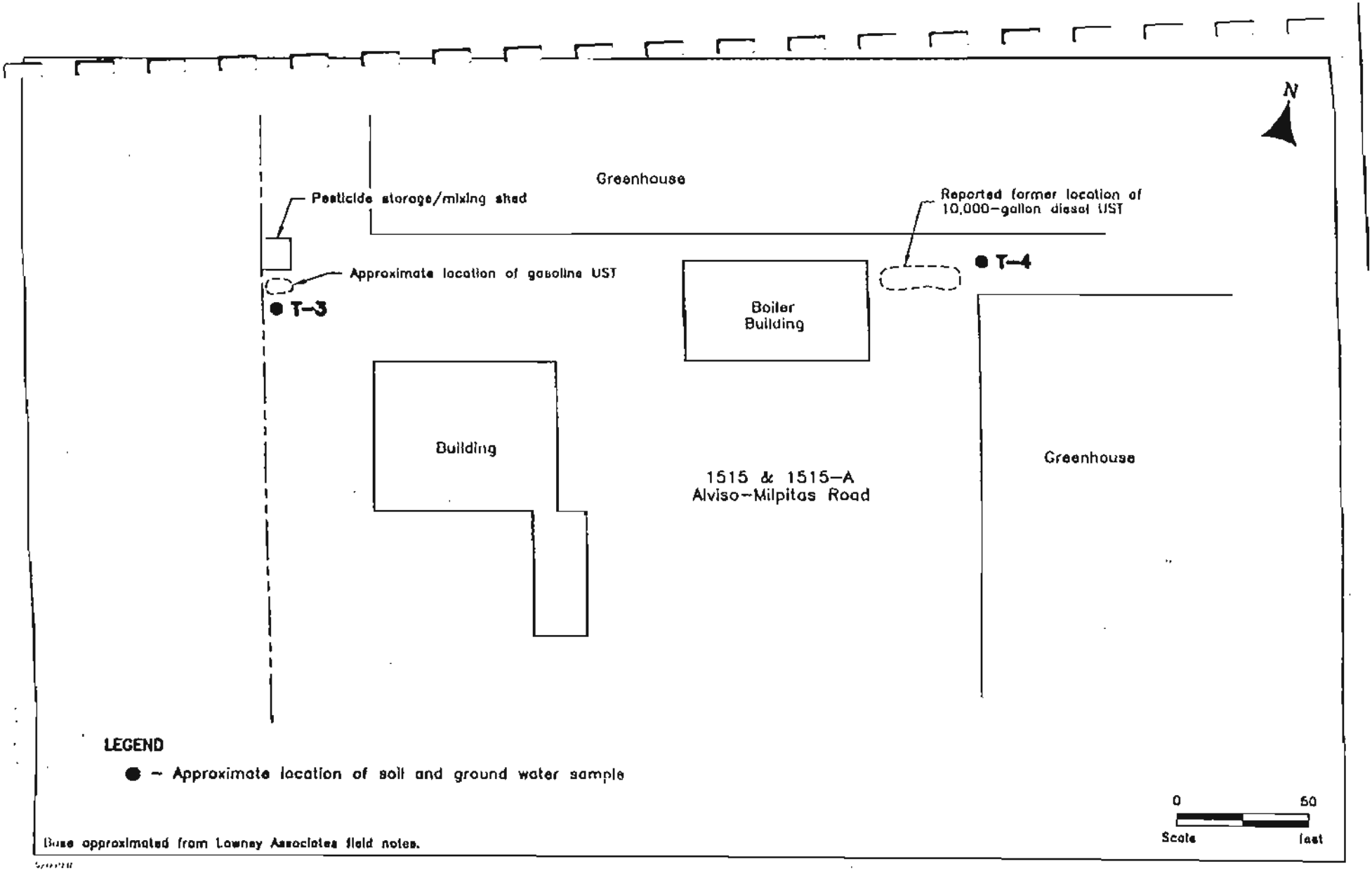


SITE PLAN
HIGHWAY 237/COYOTE CREEK 50-ACRE SITE
San Jose, California

LOVNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

FIGURE 1

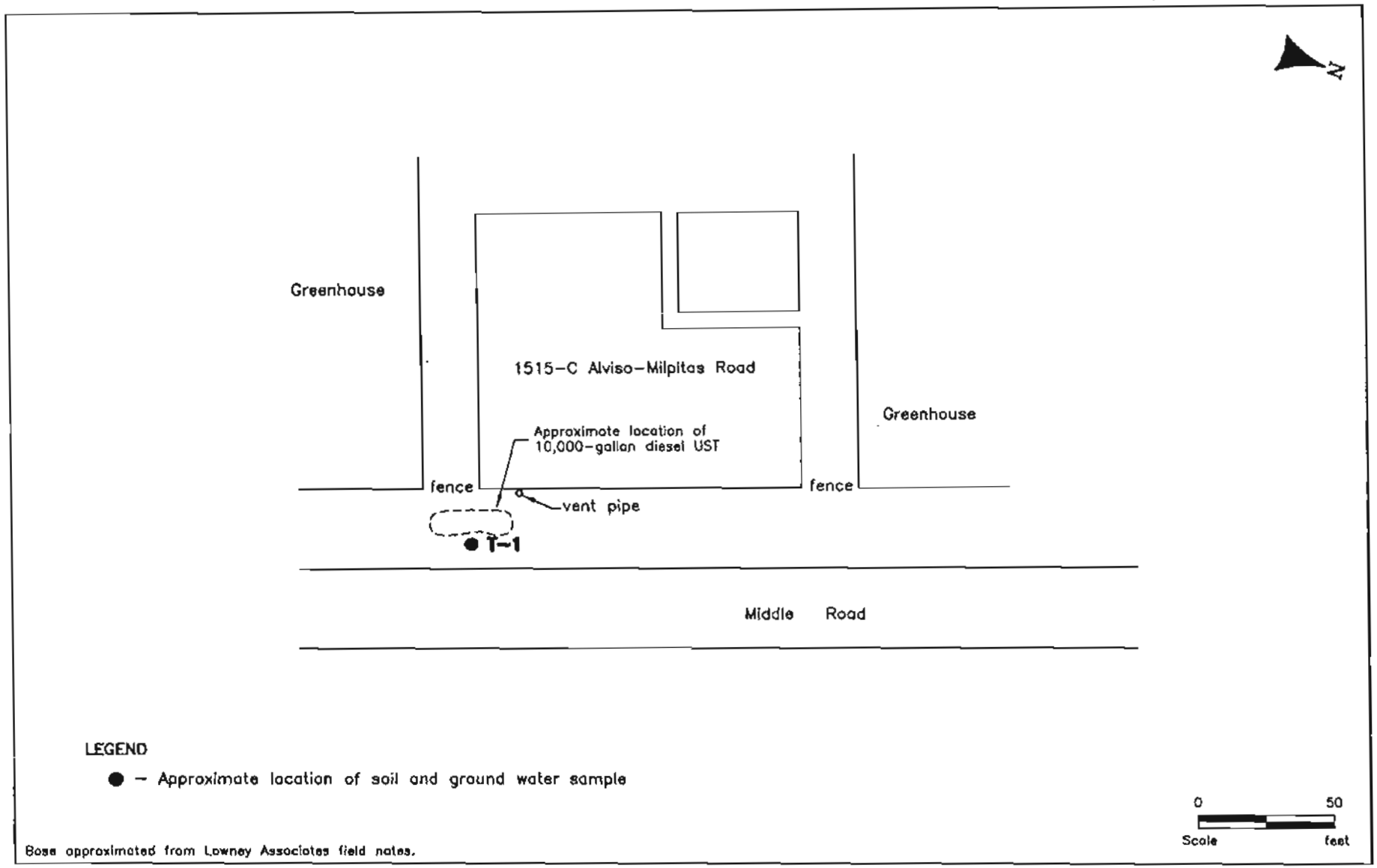
587-12



SITE PLAN
55-ACRE LIN/HOM PROPERTY
San Jose, California

LOWNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

FIGURE 3
687-12F



SITE PLAN

55-ACRE LIN/HOM PROPERTY

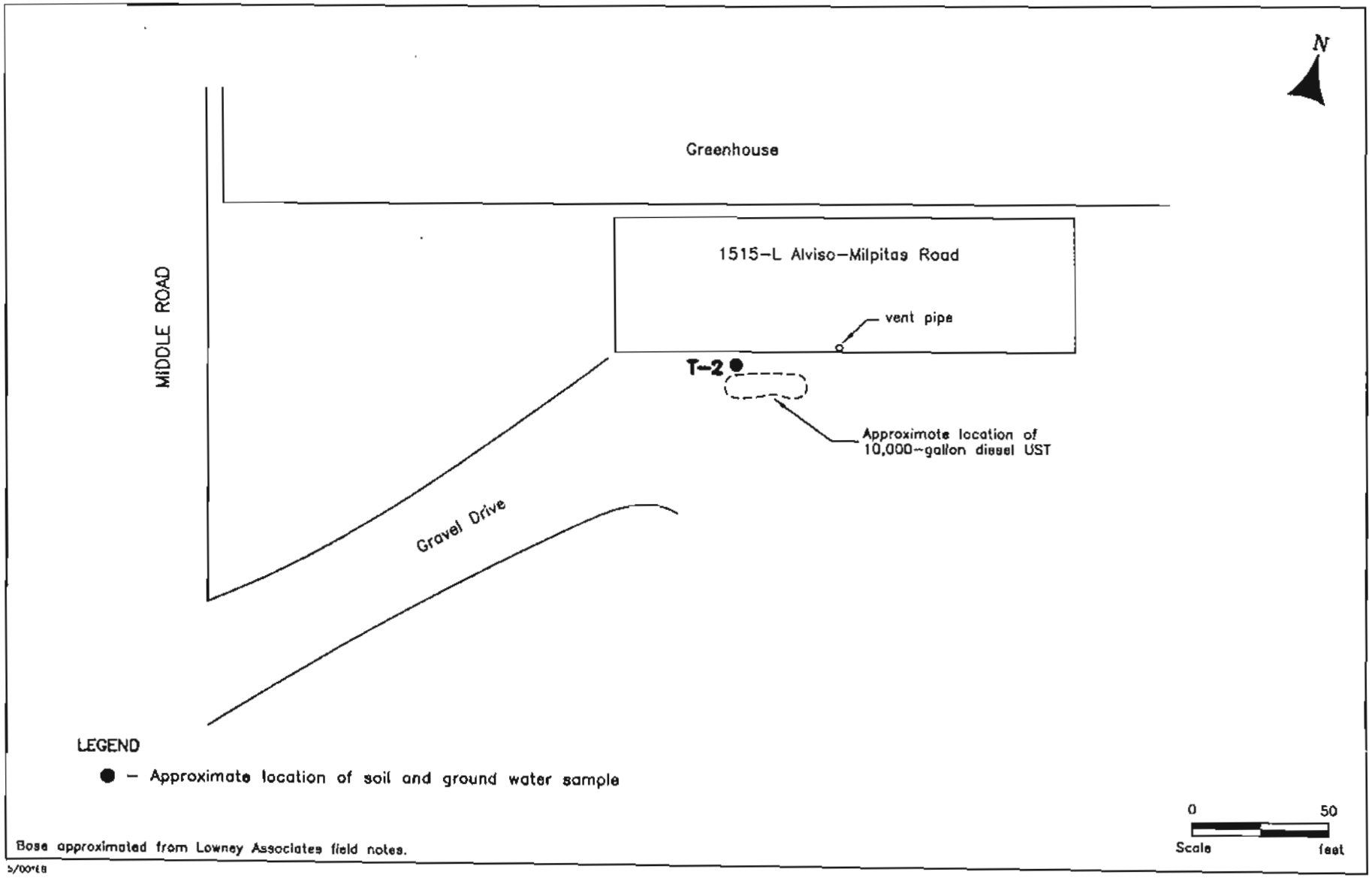
San Jose, California

LOWNEY ASSOCIATES

Environmental/Geotechnical/Engineering Services

FIGURE 4

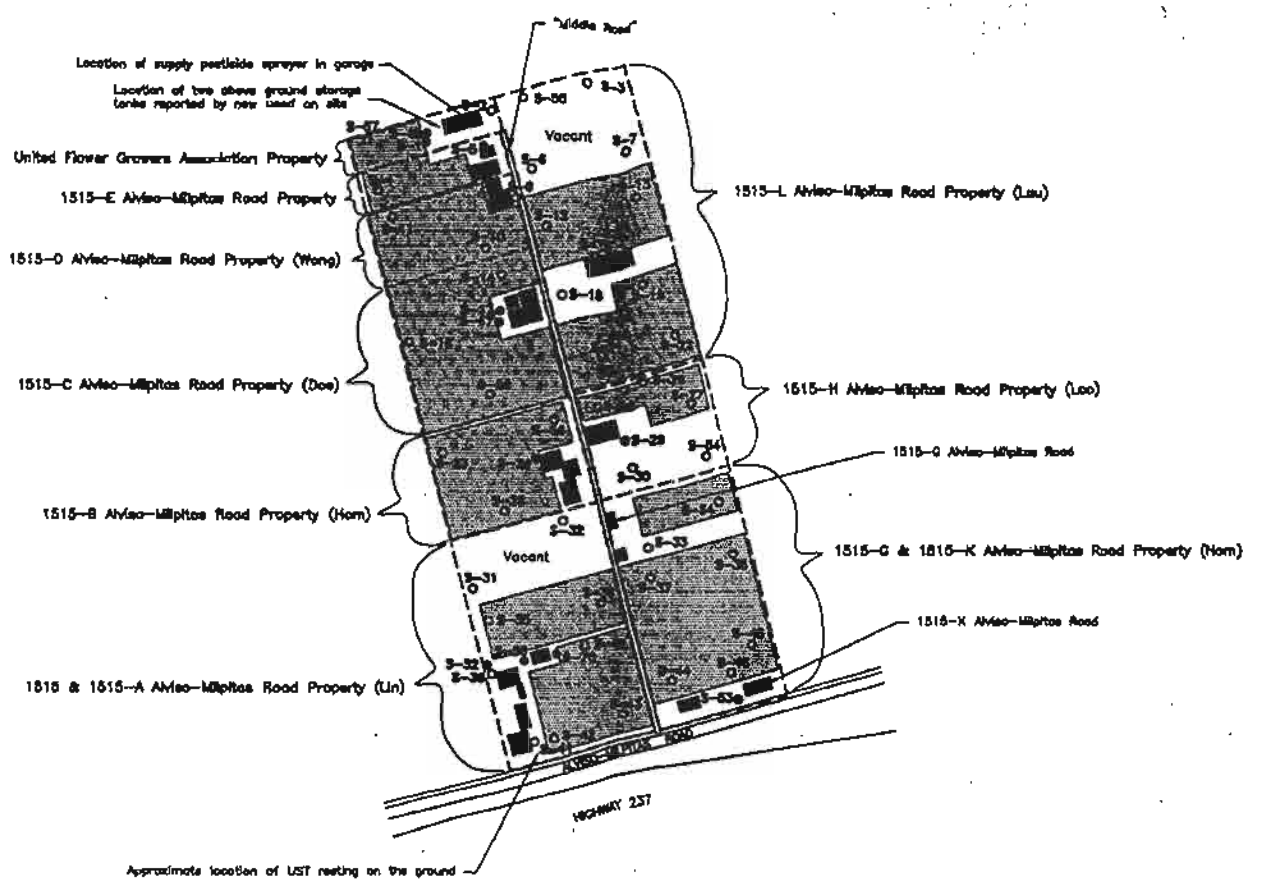
687-12F



SITE PLAN
55-ACRE LIN/HOM PROPERTY
San Jose, California

LOWNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

FIGURE 5
587-12F



LEGEND

O – Approximate location of greenhouse area/former agricultural area soil sample

● – Approximate location of pesticide mixing/storage area soil sample and ground water sample (if applicable)

– Approximate location of on–site greenhouse/nursery

– Approximate location of on–site structures

Base by Unknown.

SITE PLAN
55–ACRE LIN/HOM PROPERTY
San Jose, California

LOUNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

FIGURE 4

557–12F

APPENDIX A

SAMPLING PROTOCOL AND ANALYTICAL RESULTS

Soil Borings: Fifty-nine soil borings were drilled to depths of approximately 2½ to 10 feet. The borings were drilled using a Geoprobe (macro-core), a hand auger and slide hammer, or a macro-core hand sampler.

Soil Sampling: Soil samples for laboratory analysis were collected in acetate or brass liners. The ends of the liners were covered in aluminum foil or Teflon film, fitted with plastic end caps, taped, and labeled with a unique identification number. The samples were then placed in an ice-chilled cooler, and transported to a state-certified analytical laboratory with chain of custody documentation.

Ground Water Sampling: Borings S-29, S-47, and S-50 were converted into "temporary" wells with the installation of 1-inch I.D. flush-threaded, Schedule 40 PVC casing. The casing in the lower portion of the well had 0.02-inch factory machined slots. Ground water grab samples were collected from the temporary wells with a Teflon bailer. Samples were collected in appropriate sampled bottles, labeled, and immediately placed into an ice-chilled chest for delivery to a state-certified analytical laboratory for analysis.

A Teflon bailer was used to collect the samples from borings S-24, S-51, and S-53 that were completed to ground water depth. Samples were collected in appropriate sample bottles, labeled, and immediately placed into an ice-chilled chest for delivery to a state-certified analytical laboratory for analysis.

Equipment Decontamination: All drilling and sampling equipment was cleaned in a solution of laboratory grade detergent and distilled water or steam cleaned before use at each sampling point.

Analytical Results: The chilled samples were delivered to a state-certified analytical laboratory. Chain of custody documentation was maintained for all samples. Attached are copies of the analytical results and the chain of custody forms.

Los Esteros Critical Energy Facility

Appendix 8.14-B
Phase II Supplemental Soil Quality Evaluation

December 2003

LOWNEYASSOCIATES
Environmental/Geotechnical/Engineering Services

Mountain View
Oakland
San Ramon
Fullerton

July 20, 2000
587-12F

Mr. Neal Pospisil
CALPINE
620 Coolidge Drive, Suite 200
Folsom, California 95630

RE: SUPPLEMENTAL SOIL QUALITY EVALUATION
55-ACRE LIN/HOM PARCEL
SAN JOSE, CALIFORNIA

Dear Mr. Pospisil:

Lowney Associates is pleased to present this supplemental soil quality evaluation for the 55-acre Lin/Hom Parcel located in San Jose, California. This soil quality evaluation was initiated when elevated concentrations of organochlorine pesticides and metals were detected in near-surface soil samples collected during the Phase II investigation of the site (Lowney 2000). This letter presents the results of the additional work performed.

SITE BACKGROUND

The approximately 55-acre parcel is located near the northwest intersection of Highway 237 and Coyote Creek. The site is located in an agricultural, residential, and commercial area and is bounded by McCarthy Lane to the north; Alviso-Milpitas Road to the south; agricultural, residential, and commercial properties to the east; and vacant land to the west (Figure 1). This parcel currently is being used for various agricultural farming purposes. The site is developed with several nursery/greenhouse complexes and residential structures.

During the Phase II investigation of the 55-acre Lin/Hom parcel, elevated concentrations of metals and organochlorine pesticides were detected in shallow soil samples collected at the site. Lead and arsenic were detected at concentrations (up to 310 parts per million [ppm] and 67 ppm, respectively) above what would typically be expected as background concentrations. With regards to organochlorine pesticides, in about half of the samples, concentrations of total DDT were reported above the 1,000 ppb hazardous waste threshold (TTLC), but below the EPA's health-based Preliminary Remediation Goal (PRG) of 12,000 ppb. Additionally, toxaphene was detected in one shallow sample (S-52) at 12,000 ppb, above both the PRG and TTLC for this constituent.

PURPOSE/ SCOPE OF WORK

To evaluate the vertical extent of impacted soil, selected deeper soil samples (collected during the Phase II investigation and preserved at the laboratory) were analyzed for lead, arsenic, and organochlorine pesticides. These additional samples (collected at 1½ and

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2½ feet below the ground surface) were selected from borings S-6, S-15, S-26, and S-31 (see Figure 2 for boring locations). These samples were selected based on analytical results and distribution across the site.

To better evaluate the distribution of toxaphene-impacted soil, the deeper samples collected during the Phase II investigation from boring S-52 were analyzed for organochlorine pesticides. In addition, four additional borings were advanced (SS-1, SS-2, SS-3, and SS-4) to a depth of approximately 1½ feet on July 5, 2000 to evaluate the distribution of toxaphene in the vicinity of boring S-52 (Figure 3). As shown on Figure 3, these additional borings encircled boring S-52 with an approximately 10-foot radius. Two soil samples were collected from each additional boring at depths of ½ and 1½ feet below the ground surface. The eight samples were analyzed for toxaphene only.

RESULTS

The soil samples were analyzed at a state-certified analytical laboratory. A summary of the analytical results for organochlorine pesticides in the selected deeper samples and from the toxaphene-impacted area are presented in Table 1. The prior results from the shallow (½-foot depth) samples are also shown for comparison. Laboratory reports are presented in Attachment A. A brief summary of the deeper sample results is presented below.

- Total DDT was detected at concentrations ranging up to 1,210 ppb. However, in only one of the deeper samples did the concentration exceed the TTLC value for total DDT. None of the concentrations detected exceeded the PRG for an industrial use site.

- Beta- and delta-BHC were detected at concentrations ranging up to 240 and 1,200 ppb, respectively. The levels of beta-BHC detected do not exceed the PRG value, while delta-BHC has no established PRG value.

- At the S-52 sample location, toxaphene was detected in the 1½-foot sample at 15,000 ppb, but decreased to 2,000 ppb in the 2½-foot sample. The lower concentration does not exceed either the PRG or TTLC value.

- All other organochlorine pesticide constituents were not detected.

Table 1. Analytical Results of Soil Samples – Organochlorine Pesticides
(concentrations in parts per billion)

Boring Number	Depth (feet)	DDT	DDE	DDD	Toxaphene	Beta-BHC	Delta-BHC	Alpha-BHC
S-6**	0 – ½	483	1,800	ND	ND	ND	ND	ND
S-6	1 – 1½	61	383	ND	ND	ND	ND	ND
S-6	2 – 2½	27	167	ND	ND	ND	ND	ND
S-15**	0 – ½	ND	379	ND	ND	ND	ND	ND
S-15	1 – 1½	ND	ND	ND	ND	ND	ND	ND
S-15	2 – 2½	ND	ND	ND	ND	ND	ND	ND
S-26**	0 – ½	ND	1,730	ND	ND	ND	ND	ND
S-26	1 – 1½	ND	15	ND	ND	ND	ND	ND
S-26	2 – 2½	ND	ND	ND	ND	ND	ND	ND
S-31**	0 – ½	1,780	ND	ND	ND	ND	ND	ND
S-31	1 – 1½	ND	1,210	ND	ND	ND	ND	ND
S-31	2 – 2½	ND	4.7	ND	ND	ND	ND	ND
S-52**	0 – ½	98	23	14	12,000	230	1,400	130
S-52	1 – 1½	ND	ND	ND	15,000	240	1,200	ND
S-52	2 – 2½	ND	ND	ND	2,000	36	140	ND
SS-1	0 – ½	NA	NA	NA	ND	NA	NA	NA
SS-1	1 – 1½	NA	NA	NA	ND	NA	NA	NA
SS-2	0 – ½	NA	NA	NA	ND	NA	NA	NA
SS-2	1 – 1½	NA	NA	NA	ND	NA	NA	NA
SS-3	0 – ½	NA	NA	NA	ND	NA	NA	NA
SS-3	1 – 1½	NA	NA	NA	ND	NA	NA	NA
SS-4	0 – ½	NA	NA	NA	ND	NA	NA	NA
SS-4	1 – 1½	NA	NA	NA	ND	NA	NA	NA
PRG	–	12,000	12,000	17,000	2,200	2,100	NE	590
TTLC	–	1,000*	1,000*	1,000*	5,000	NE	NE	NE

ND Not Detected (detection limits vary)
NA Not Analyzed
PRG Preliminary Remediation Goal for industrial site use-EPA Region 9, 1999
TTLC Total Threshold Limit Concentration
NE Not Established
* Total DDT = DDT + DDE + DDD
** Shallow samples collected during Phase II investigation

Table 2 presents a summary of the analytical results for arsenic and lead in the selected deeper samples. The prior results from the shallow (½-foot samples) are shown for comparison.

- Arsenic was detected in the deeper samples at concentrations ranging up to 36 parts per million (ppm). In general, the concentrations decreased with depth.
- Lead was detected in all but one of the deeper samples. However, only in the 1½-foot sample from boring S-31 did the lead concentration (120 ppm) exceed typical background levels. This concentration does not exceed either the PRG or the TTLC value.

Table 2. Analytical Results of Selected Soil Samples – Metals
(concentrations in parts per million)

Boring Number	Depth (feet)	Arsenic	Lead
S-6*	0 – ½	48	140
S-6	1 – 1½	27	14
S-6	2 – 2½	26	11
S-15*	0 – ½	19	41
S-15	1 – 1½	24	8.6
S-15	2 – 2½	20	5.4
S-26*	0 – ½	49	110
S-26	1 – 1½	<5.0	<5.0
S-26	2 – 2½	<5.0	7.3
S-31*	0 – ½	34	88
S-31	1 – 1½	36	120
S-31	2 – 2½	<5.0	5.2
PRG	--	2.7	1,000
TTLC	–	500	1,000

< Indicates that the compound was not detected at or above the stated laboratory reporting limit
* Shallow samples collected during Phase II investigation
PRG Preliminary Remediation Goal for industrial site use-EPA Region 9, 1999
TTLC Total Threshold Limit Concentration

CONCLUSIONS AND RECOMMENDATIONS

Vertical Distribution of Impacted Soil

The lead, arsenic, and pesticide concentrations detected in the deeper soil samples appear to generally decrease within depth with the upper 1 or 2 feet of soil. The pesticide levels detected in both the near-surface (½ foot) and deeper samples generally do not exceed their respective PRG values (for industrial site use), with the exception of toxaphene in sample S-52 (as discussed below). Therefore, the concentrations detected do not appear to pose a significant threat to human health in a commercial/industrial setting. Although the metal concentrations detected in shallow soil appear to be above

typical background levels, they also do not appear to pose a significant threat to human health in a commercial/industrial setting. If property use were to be changed to a residential setting, additional work would likely be required. Since the site is planned for commercial use and will be largely capped by buildings and associated concrete drives and parking areas, risk to human health and the environment will be significantly reduced.

As discussed in the Phase II report, due to the presence of residual pesticides and elevated levels of metals, a construction worker health and safety plan should be developed for the earthwork portion of the proposed development. In addition, if on-site soil is to be off-hauled, additional characterization should be performed prior to transport. Total DDT concentrations in mainly the upper ½ foot of soil appear to exceed California's hazardous waste criteria (TTLC of 1,000 ppb). Since off-site disposal of this soil could be costly, we recommend that the planned development be designed to minimize the amount of soil to be exported.

Impacted Soil at Mixing/Storage Areas

Based on the sampling performed, the level of toxaphene in soil near boring S-52 exceeds both the PRG value for industrial site use (2,200 ppb) and the TTLC (1,000 ppb). These elevated levels appear to extend only to a depth of approximately 2 feet. The horizontal extent of toxaphene-impacted soil also appears to be localized around boring S-52. This is demonstrated by the non-detection of toxaphene in samples S-1 through S-4. We understand that this was an area containing a former pesticide storage and mixing structure with dimensions of approximately 5 feet by 5 feet. Since the impacted soil in this area appears to be related to storage and mixing activities and not due to typical agricultural pesticide application, we recommend excavation and proper off-site disposal of the soil in a 7- by 7-foot square around the former extent of the structure, and down to a depth of 2 feet. The estimated volume to be removed consists of approximately 4 cubic yards (6 tons) of material.

An additional pesticide storage/mixing area is located near sample S-24. Total DDT was detected at a concentration of 11,030 ppb in the near-surface sample from this boring during the Phase II investigation. Since the area also appears to have been impacted by storage/mixing activities, we recommend that soil in this area be excavated and properly disposed off-site. Based on the storage area configuration, we estimate that approximately 15 cubic yards (25 tons) of material may need to be excavated and removed from this area. Following removal of the soil, verification soil samples should be collected to document that the impacted soil was adequately removed.

We estimate that the cost to excavate, transport, and dispose the soil will range from $150 to $250 per ton. Verification sampling and consulting services likely will range from $5,000 to $10,000. Due to waste classification laws, soil disposal costs could be higher if it is determined that pure DDT or toxaphene were purchased for use at the site. However, this typically is not the case.

LIMITATIONS

This report was prepared for the sole use of Calpine in evaluating soil quality at selected on-site locations at the time of this study. We make no warranty, expressed or implied, except that our services have been performed in accordance with environmental principles generally accepted at this time and location. The chemical and other data presented in this report can change over time and are applicable only to the time this study was performed. We are not responsible for the data presented by others.

If you have any questions, please call and we will be glad to discuss them with you.

Very truly yours,

LOWNEY ASSOCIATES

James P. Kiernan
Staff Environmental Engineer

Douglas T. Young, R.G.
Senior Project Geologist

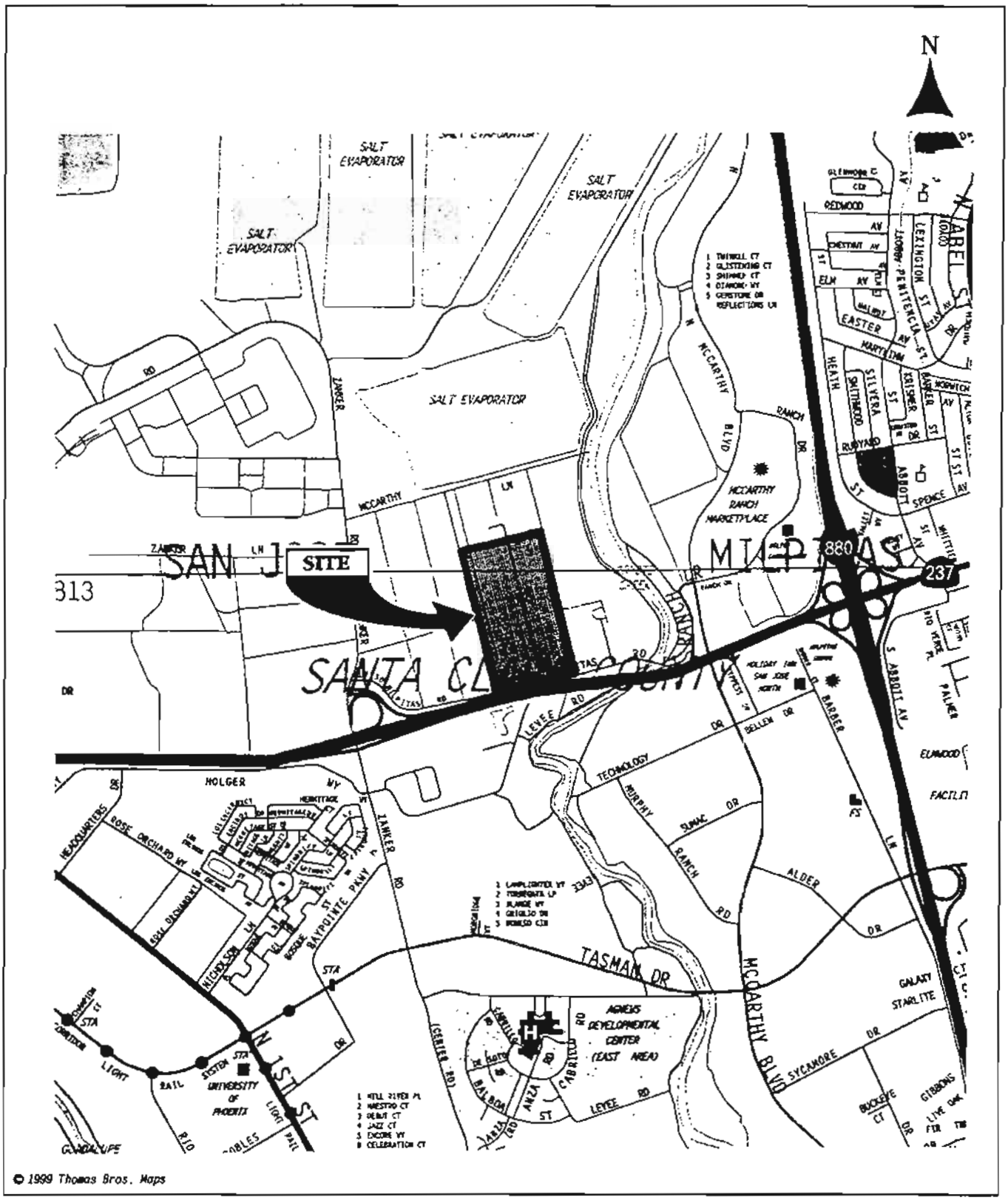
REGISTERED GEOLOGIST
DOUGLAS T YOUNG
5850
STATE OF CALIFORNIA

SIF:DTY:JPK:tjc

Copies: Addressee (6)

Attachments: Vicinity Map
Site Plans
Analytical Results

MV, 587-12F phase III letter ver2.doc



VICINITY MAP

55-ACRE LIN/HOM PROPERTY

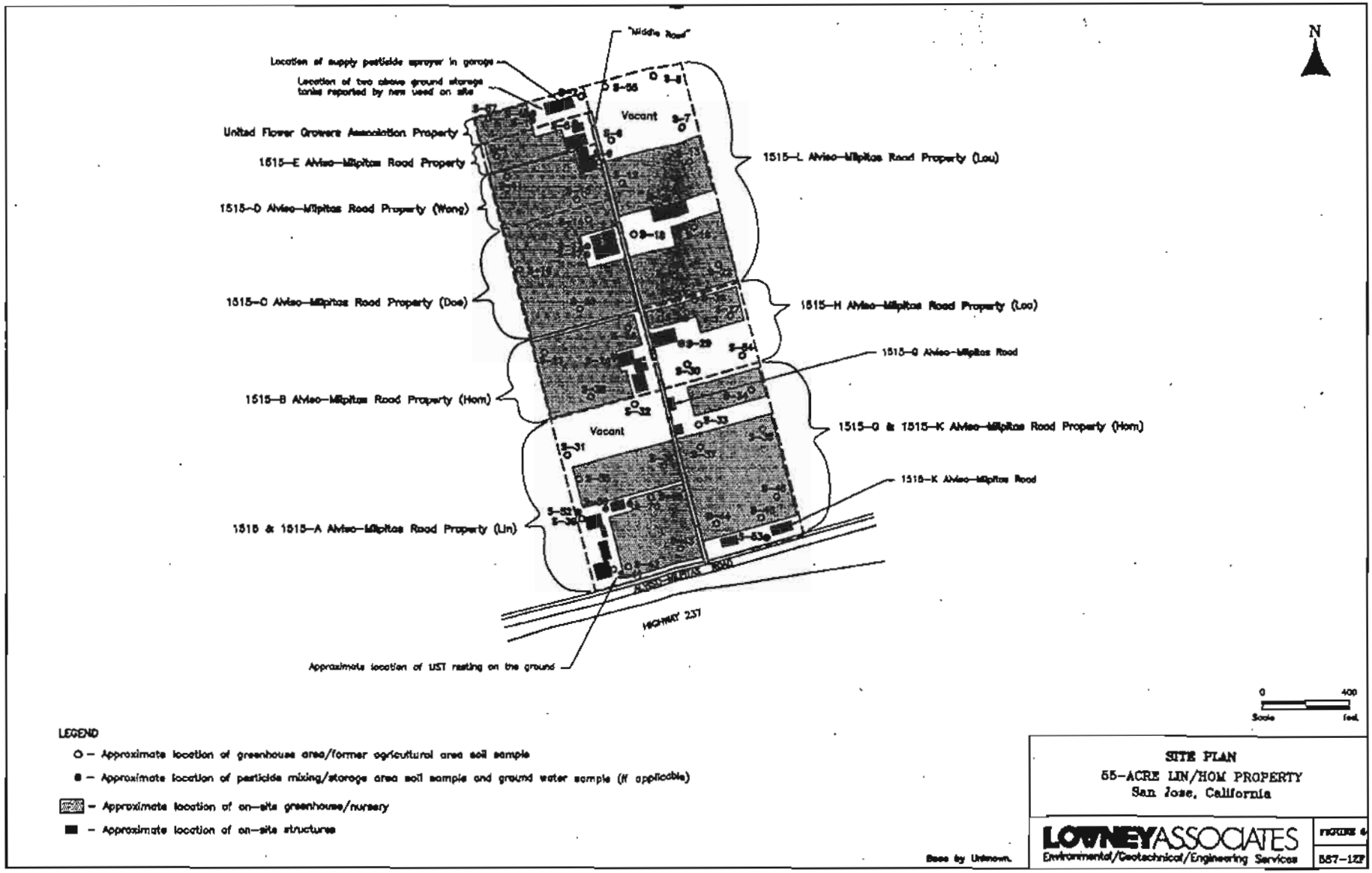
San Jose, California

LOVNEY ASSOCIATES

Environmental/Geotechnical/Engineering Services

FIGURE 1

587-12P



LEGEND

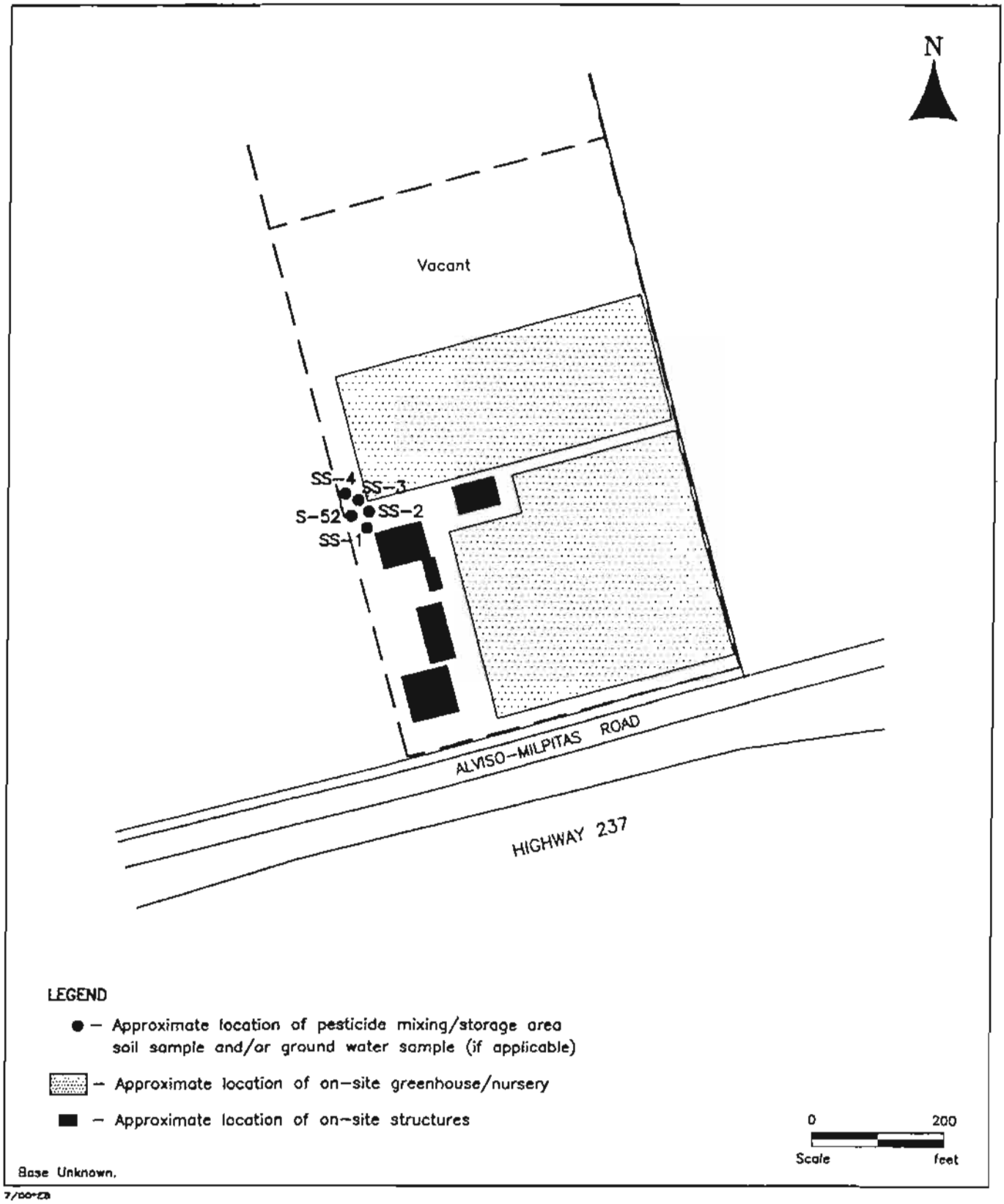
- O – Approximate location of greenhouse area/former agricultural area soil sample
- ● – Approximate location of pesticide mixing/storage area soil sample and ground water sample (if applicable)
- ▨ – Approximate location of on-site greenhouse/nursery
- ■ – Approximate location of on-site structures

Base by Unknown.

SITE PLAN
55-ACRE LIN/HOM PROPERTY
San Jose, California

LOVNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

FIGURE 4
557-12F



SITE PLAN

55-ACRE LIN/HOM PROPERTY

San Jose, California

LOVNEY ASSOCIATES

Environmental/Geotechnical/Engineering Services

FIGURE 3

587-12P

ATTACHMENT A

ANALYTICAL RESULTS

ELAP No.: 1838

Entech Analytical Labs, Inc.
525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

ATTN: Michelle Anderson
SUBJECT: AMENDED REPORT

Client's Project: 20391
Lab No.: 44184-001/004

The report was amended for the following:

Client Sample I.D. for 44184-004 was corrected.

Please disregard all previous documentation that corresponds to the pages(s) enclosed.

Sincerely,

Date: 6/26/01

Cheryl De Los Reyes
Technical Operations Manager
CDR/jh

Enclosures

This cover letter is an integral part of this analytical report.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: 20391
Date Received: 05/23/00
Extraction Method: 3550B
Matrix: Solid
Units: ug/kg

Date Amended: 06/12/00

EPA Method 8081

Lab No.:	Method Blank		44184-001									
Client Sample I.D.:	–		20391-005 S-6(1-1 1/2)									
Date Sampled:	–		05/09/00									
QC Batch #:	G008080S225		G008080S225									
Date Extracted:	05/23/00		05/23/00									
Date Analyzed :	05/30/00		05/30/00									
Analyst Initials:	NN		NN									
Dilution Factor:	1		10									
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Alpha-BHC	2	2	ND	20	ND								
Gamma-BHC (Lindane)	2	2	ND	20	ND								
Beta-BHC	2	2	ND	20	ND								
Heptachlor	2	2	ND	20	ND								
Delta-BHC	2	2	ND	20	ND								
Aldrin	2	2	ND	20	ND								
Heptachlor Epoxide	2	2	ND	20	ND								
Endosulfan I	2	2	ND	20	ND								
4,4'-DDE	4	4	ND	40	383								
Dieldrin	4	4	ND	40	ND								
Endrin	4	4	ND	40	ND								
4,4'-DDD	4	4	ND	40	ND								
Endosulfan II	4	4	ND	40	ND								
4,4'-DDT	4	4	ND	40	61								
Endrin Aldehyde	4	4	ND	40	ND								
Endosulfan Sulfate	4	4	ND	40	ND								
Methoxychlor	17	17	ND	170	ND								
gamma-Chlordane	2	2	ND	20	ND								
alpha-Chlordane	2	2	ND	20	ND								
Toxaphene	170	170	ND	1700	ND								
Total Chlordane	17	4	ND	40	ND								

Surrogate Recovery

Surrogate	%Rec.	Limits	%Rec.	Limits								
Tetrachloro-m-xylene	103	30-150	120	30-150								
Decachlorobiphenyl	150	30-150	197*	30-150								

MDL = Method Detection Limit
ND = Not Detected (Below DLR).
DLR = MDL X Dilution Factor
NA = Not Analyzed

* = Surrogate recoveries outside of limits due to matrix interference.

Reviewed/Approved By: E. Barrau

Edgar Morrison
Organics Supervisor

Date: 06/12/00

The cover letter is an integral part of this analytical report.

Client:	Entech Analytical Labs, Inc.
Attn:	Michelle Anderson
Client's Project:	20391
Date Received:	05/23/00
Extraction Method:	3550B
Matrix:	Solid
Units:	ug/kg

Date Amended: 06/12/00

EPA Method 8081

Lab No.:	44184-002											
Client Sample I.D.:	20391-006 S-6(2-2 1/2)											
Date Sampled:	05/09/00											
QC Batch #:	G008080S225											
Date Extracted:	05/23/00											
Date Analyzed :	05/30/00											
Analyst Initials:	NN											
Dilution Factor:	5											
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Alpha-BHC	2	10	ND										
Gamma-BHC (Lindane)	2	10	ND										
Beta-BHC	2	10	ND										
Heptachlor	2	10	ND										
Delta-BHC	2	10	ND										
Aldrin	2	10	ND										
Heptachlor Epoxide	2	10	ND										
Endosulfan I	2	10	ND										
4,4'-DDE	4	20	167										
Dieldrin	4	20	ND										
Endrin	4	20	ND										
4,4'-DDD	4	20	ND										
Endosulfan II	4	20	ND										
4,4'-DDT	4	20	27										
Endrin Aldehyde	4	20	ND										
Endosulfan Sulfate	4	20	ND										
Methoxychlor	17	85	ND										
gamma-Chlordane	2	10	ND										
alpha-Chlordane	2	10	ND										
Toxaphene	170	850	ND										
Total Chlordane	17	20	ND										

Surrogate Recovery

Surrogate	%Rec	Limits											
Tetrachloro-m-xylene	109	30-150											
Decachlorobiphenyl	177*	30-150											

MDL = Method Detection Limit
ND = Not Detected (Below DLR).
DLR = MDL X Dilution Factor
NA = Not Analyzed

* = Surrogate recoveries outside of limits due to matrix interference.

Reviewed/Approved By: Edgar Morrison
Organics Supervisor

Date: 06/12/00

The cover letter is an integral part of this analytical report.

Client:	Entech Analytical Labs, Inc.
Attn:	Michelle Anderson
Client's Project:	20391
Date Received:	05/23/00
Extraction Method:	3550B
Matrix:	Solid
Units:	ug/kg

Date Amended: 06/12/00

EPA Method 8081

Lab No.:	44184-003											
Client Sample I.D.:	20391-017 S-15(1-1 1/2)											
Date Sampled:	05/09/00											
QC Batch #:	G008080S225											
Date Extracted:	05/23/00											
Date Analyzed :	05/30/00											
Analyst Initials:	NN											
Dilution Factor:	1											
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Alpha-BHC	2	2	ND										
Gamma-BHC (Lindane)	2	2	ND										
Beta-BHC	2	2	ND										
Heptachlor	2	2	ND										
Delta-BHC	2	2	ND										
Aldrin	2	2	ND										
Heptachlor Epoxide	2	2	ND										
Endosulfan I	2	2	ND										
4,4'-DDE	4	4	ND										
Dieldrin	4	4	ND										
Endrin	4	4	ND										
4,4'-DDD	4	4	ND										
Endosulfan II	4	4	ND										
4,4'-DDT	4	4	ND										
Endrin Aldehyde	4	4	ND										
Endosulfan Sulfate	4	4	ND										
Methoxychlor	17	17	ND										
gamma-Chlordane	2	2	ND										
alpha-Chlordane	2	2	ND										
Toxaphene	170	170	ND										
Total Chlordane	17	4	ND										

Surrogate Recovery

Surrogate	%Rec.	Limits										
Tetrachloro-m-xylene	87	30-150										
Decachlorobiphenyl	136	30-150										

MDL = Method Detection Limit
ND = Not Detected (Below DLR).
DLR = MDL X Dilution Factor
NA = Not Analyzed

Reviewed/Approved By: _____ Date: 06/12/00

Edgar Morrison
Organics Supervisor

The cover letter is an integral part of this analytical report.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: 20391
Date Received: 05/23/00
Extraction Method: 3550B
Matrix: Solid
Units: ug/kg

Date Amended: 06/12/00, 06/26/00

EPA Method 8081

Lab No.:	44184-004											
Client Sample I.D.:	20391-018 S-15(2-2 1/2)											
Date Sampled:	05/09/00											
QC Batch #:	G008080S225											
Date Extracted:	05/23/00											
Date Analyzed :	05/30/00											
Analyst Initials:	NN											
Dilution Factor:	1											
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Alpha-BHC	2	2	ND										
Gamma-BHC (Lindane)	2	2	ND										
Beta-BHC	2	2	ND										
Heptachlor	2	2	ND										
Delta-BHC	2	2	ND										
Aldrin	2	2	ND										
Heptachlor Epoxide	2	2	ND										
Endosulfan I	2	2	ND										
4,4'-DDE	4	4	ND										
Dieldrin	4	4	ND										
Endrin	4	4	ND										
4,4'-DDD	4	4	ND										
Endosulfan II	4	4	ND										
4,4'-DDT	4	4	ND										
Endrin Aldehyde	4	4	ND										
Endosulfan Sulfate	4	4	ND										
Methoxychlor	17	17	ND										
gamma-Chlordane	2	2	ND										
alpha-Chlordane	2	2	ND										
Toxaphene	170	170	ND										
Total Chlordane	17	4	ND										

Surrogate Recovery

Surrogate	%Rec	Limits											
Tetrachloro-m-xylene	90	30-150											
Decachlorobiphenyl	140	30-150											

MDL = Method Detection Limit
ND = Not Detected (Below DLR).
DLR = MDL X Dilution Factor
NA = Not Analyzed

Reviewed/Approved By: _____ Date: 6/26/00
Edgar Morrison
Organics Supervisor

The cover letter is an integral part of this analytical report.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: 20391
Date Received: 05/23/00
Extraction Method: 3550B
Matrix: Solid
Units: ug/kg

EPA Method 8081

Lab No.:	LCS											
Client Sample I.D.:	–											
Date Sampled:	–											
QC Batch #:	G008080S225											
Date Extracted:	05/23/00											
Date Analyzed :	05/30/00											
Analyst Initials:	NN											
Dilution Factor:	1											
ANALYTE	MDL	%Rec	Limits	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Alpha-BHC	2	124	26-143										
Gamma-BHC (Lindane)	2	123	26-143										
Beta-BHC	2	106	26-143										
Heptachlor	2	111	26-143										
Delta-BHC	2	119	26-143										
Aldrin	2	115	26-143										
Heptachlor Epoxide	2	112	26-143										
Endosulfan I	2	111	26-143										
4,4'-DDE	4	117	26-143										
Dieldrin	4	118	26-143										
Endrin	4	123	26-143										
4,4'-DDD	4	115	26-143										
Endosulfan II	4	117	26-143										
4,4'-DDT	4	122	26-143										
Endrin Aldehyde	4	105	26-143										
Endosulfan Sulfate	4	127	26-143										
Methoxychlor	17	134	26-143										
gamma-Chlordane	2	113	26-143										
alpha-Chlordane	2	114	26-143										
Toxaphene	170	NS	NS										
Total Chlordane	17	NS	NS										

Surrogate Recovery

Surrogate	%Rec.	Limits											
Tetrachloro-m-xylene	98	30-150											
Decachlorobiphenyl	150	30-150											

NS = Not Spiked

MDL = Method Detection Limit
ND = Not Detected (Below DLR).
DLR = MDL X Dilution Factor
NA = Not Analyzed

Reviewed/Approved By: _____ Date: 06/12/00

Edgar Morrison
Organics Supervisor

The cover letter is an integral part of this analytical report.

Spike Recovery and RPD Summary Report - SOIL(ug/kg)

Method : C:\HPCHEM\1\METHODS\8080526.M (Chemstation Integrator)
Title :
Last Update : Sat May 27 19:08:17 2000
Response via : Initial Calibration

Non-Spiked Sample: C0526071.D

	Spike Sample	Spike Duplicate Sample
File ID :	C0526073.D	C0526074.D
Sample :	000523BLKS1,MS,	000523BLKS1,MSD,
Acq Time:	28 May 2000 5:40 am	28 May 2000 6:15 am

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
gamma-BHC	0.0	40	41	47	103	117	12#	9	50-127
Heptachlor	0.0	40	38	43	95	106	12	12	35-136
Aldrin	0.0	40	42	47	105	118	11	15	47-143
Dieldrin	0.0	80	83	93	104	117	12#	8	54-134
Endrin	0.0	80	82	90	102	112	9	16	61-138
4,4' -DDT	0.0	80	84	95	106	118	11	22	15-155

- Failed RPD limits. Batch validated by LCS passing.

QCBATCH#C008080S225

Reviewed/Approved by: _____ Date: 06/09/00
Edgar Morrison
Department Supervisor

Advanced Technology Laboratories
1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Entech Analytical Labs, Inc.

CA ELAP # 1-2346

525 Del Rey Avenue, Suite E, Sunnyvale, CA 94086 (408) 735-1550 FAX (408) 735-1554

Subcontract Chain of Custody

Subcontract Lab:	Project Name:	Date Sent:	Due Date:	PO Number:
ATL	20391	5/22/00	5/30/00	20391

Sample Number:	Customer Sample Number:	Matrix:	Test:	Method:	Collect Date:	Collect Time	Bottle Type:	Preservative:
20391-005	S-6 (1-1½)	Solid	EPA 8081-ATL	EPA 8081	5/9/00		4 oz jar	
20391-006	S-6 (2-2½)	Solid	EPA 8081-ATL	EPA 8081	5/9/00		4 oz jar	
20391-017	S-15 (1-1½)	Solid	EPA 8081-ATL	EPA 8081	5/9/00		4 oz jar	
20391-018	S-15 (2-2½)	Solid	EPA 8081-ATL	EPA 8081	5/9/00		4 oz jar	

Relinquished By:	Received By:	Date:	Time:
Marco Guslis	Golden State	5/22/00	1800
Relinquished By:	Received By:	Date:	Time:
	Diane Delvan	5-23-00	0900
Relinquished By:	Received By:	Date:	Time:

Notes: Hold time up on 5/23/00

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

May 31, 2000

Doug Young
Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043

Order:	20399	**Date Collected:**	5/9/00
Project Name:	US Data Port 50-Acre Parcel	**Date Received:**	5/10/00
Project Number:	587-12F	**P.O. Number:**	
Project Notes:			

On May 10, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	Arsenic	EPA 6010B
	EPA 8081-ATL	EPA 8081
	Lead	EPA 6010B

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attn: Doug Young

Date: 5/31/00
Date Received: 5/10/00
Project Name: US Data Port 50-Acre Parcel
Project Number: 587-12F
P.O. Number:
Sampled By: Ryan Gerber

Certified Analytical Report

Order ID: 20399 **Lab Sample ID:** 20399-007 **Client Sample ID:** S-26 1-1 1/2
Sample Time: 5:00 PM **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Arsenic	ND	5	1	5	mg/Kg	5/25/00	5/30/00	SM000524	EPA 6010B
Lead	ND	5	1	5	mg/Kg	5/25/00	5/30/00	SM000524	EPA 6010B

Order ID: 20399 **Lab Sample ID:** 20399-008 **Client Sample ID:** S-26 2-2 1/2
Sample Time: 5:00 PM **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Arsenic	ND	5	1	5	mg/Kg	5/25/00	5/30/00	SM000524	EPA 6010B
Lead	7.3	5	1	5	mg/Kg	5/25/00	5/30/00	SM000524	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

May 30, 2000 ELAP No.: 1838

Entech Analytical Labs, Inc.
525 Del Rey Avenue, Suite E,
Sunnyvale, CA 94086

ATTN: Michelle Anderson

Client's Project: 20399
Lab No.: 44185-001/002

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (562) 989 - 4045 if I can be of further assistance to your company.

Sincerely,

Cheryl De Los Reyes
Technical Operations Manager
CDR/jh

Enclosures

This cover letter is an integral part of this analytical report.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: 20399
Date Received: 05/23/00
Extraction Method: 3550B
Matrix: Solid
Units: ug/kg

Date Amended: 06/12/00

EPA Method 8081

Lab No.:	Method Blank		44185-001									
Client Sample I.D.:	--		20399-007 S-26 1-1 1/2									
Date Sampled:	--		05/09/00									
QC Batch #:	G008080S225		G008080S225									
Date Extracted:	05/23/00		05/23/00									
Date Analyzed :	05/30/00		05/31/00									
Analyst Initials:	NN		NN									
Dilution Factor:	1		1									
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Alpha-BHC	2	2	ND	2	ND								
Gamma-BHC (Lindane)	2	2	ND	2	ND								
Beta-BHC	2	2	ND	2	ND								
Heptachlor	2	2	ND	2	ND								
Delta-BHC	2	2	ND	2	ND								
Aldrin	2	2	ND	2	ND								
Heptachlor Epoxide	2	2	ND	2	ND								
Endosulfan I	2	2	ND	2	ND								
4,4'-DDE	4	4	ND	4	15								
Dieldrin	4	4	ND	4	ND								
Endrin	4	4	ND	4	ND								
4,4'-DDD	4	4	ND	4	ND								
Endosulfan II	4	4	ND	4	ND								
4,4'-DDT	4	4	ND	4	ND								
Endrin Aldehyde	4	4	ND	4	ND								
Endosulfan Sulfate	4	4	ND	4	ND								
Methoxychlor	17	17	ND	17	ND								
gamma-Chlordane	2	2	ND	2	ND								
alpha-Chlordane	2	2	ND	2	ND								
Toxaphene	170	170	ND	170	ND								
Total Chlordane	17	4	ND	4	ND								

Surrogate Recovery

Surrogate	%Rec.	Limits	%Rec.	Limits								
Tetrachloro-m-xylene	103	30-150	89	30-150								
Decachlorobiphenyl	150	30-150	145	30-150								

MDL = Method Detection Limit
ND = Not Detected (Below DLR).
DLR = MDL X Dilution Factor
NA = Not Analyzed

Reviewed/Approved By: E. Morrison Date: 06/12/00

Edgar Morrison
Organics Supervisor

The cover letter is an integral part of this analytical report.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: 20399
Date Received: 05/23/00
Extraction Method: 3550B
Matrix: Solid
Units: ug/kg

Date Amended: 06/12/00

EPA Method 8081

Lab No.:	44185-002											
Client Sample I.D.:	20399-008 S-26 2-2 1/2											
Date Sampled:	05/09/00											
QC Batch #:	G008080S225											
Date Extracted:	05/23/00											
Date Analyzed :	05/31/00											
Analyst Initials:	NN											
Dilution Factor:	1											
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Alpha-BHC	2	2	ND										
Gamma-BHC (Lindane)	2	2	ND										
Beta-BHC	2	2	ND										
Heptachlor	2	2	ND										
Delta-BHC	2	2	ND										
Aldrin	2	2	ND										
Heptachlor Epoxide	2	2	ND										
Endosulfan I	2	2	ND										
4,4'-DDE	4	4	ND										
Dieldrin	4	4	ND										
Endrin	4	4	ND										
4,4'-DDD	4	4	ND										
Endosulfan II	4	4	ND										
4,4'-DDT	4	4	ND										
Endrin Aldehyde	4	4	ND										
Endosulfan Sulfate	4	4	ND										
Methoxychlor	17	17	ND										
gamma-Chlordane	2	2	ND										
alpha-Chlordane	2	2	ND										
Toxaphene	170	170	ND										
Total Chlordane	17	4	ND										

Surrogate Recovery

Surrogate	%Rec	Limits									
Tetrachloro-m-xylene	92	30-150									
Decachlorobiphenyl	149	30-150									

MDL = Method Detection Limit
ND = Not Detected (Below DLR).
DLR = MDL X Dilution Factor
NA = Not Analyzed

Reviewed/Approved By: Edgar Morrison
Organics Supervisor

Date: 06/12/00

The cover letter is an integral part of this analytical report.

Client:	Entech Analytical Labs, Inc.
Attn:	Michelle Anderson
Client's Project:	20399
Date Received:	05/23/00
Extraction Method:	3550B
Matrix:	Solid
Units:	ug/kg

EPA Method 8081

Lab No.:	LCS											
Client Sample I.D.:	–											
Date Sampled:	–											
QC Batch #:	G008080S225											
Date Extracted:	05/23/00											
Date Analyzed :	05/30/00											
Analyst Initials:	NN											
Dilution Factor:	1											
ANALYTE	MDL	%Rec	Limits	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Alpha-BHC	2	124	26-143										
Gamma-BHC (Lindane)	2	123	26-143										
Beta-BHC	2	106	26-143										
Heptachlor	2	111	26-143										
Delta-BHC	2	119	26-143										
Aldrin	2	115	26-143										
Heptachlor Epoxide	2	112	26-143										
Endosulfan I	2	111	26-143										
4,4'-DDE	4	117	26-143										
Dieldrin	4	118	26-143										
Endrin	4	123	26-143										
4,4'-DDD	4	115	26-143										
Endosulfan II	4	117	26-143										
4,4'-DDT	4	122	26-143										
Endrin Aldehyde	4	105	26-143										
Endosulfan Sulfate	4	127	26-143										
Methoxychlor	17	134	26-143										
gamma-Chlordane	2	113	26-143										
alpha-Chlordane	2	114	26-143										
Toxaphene	170	NS	NS										
Total Chlordane	17	NS	NS										

Surrogate Recovery

Surrogate	%Rec.	Limits										
Tetrachloro-m-xylene	98	30-150										
Decachlorobiphenyl	150	30-150										

NS = Not Spiked

MDL = Method Detection Limit
ND = Not Detected (Below DLR).
DLR = MDL X Dilution Factor
NA = Not Analyzed

Reviewed/Approved By: _____ Date: 06/12/00

Edgar Morrison
Organics Supervisor

The cover letter is an integral part of this analytical report.

Spike Recovery and RPD Summary Report - SOIL(ug/kg)

Method : C:\HPCHEM\1\METHODS\8080526.M (Chemstation Integrator)
Title :
Last Update : Sat May 27 19:08:17 2000
Response via : Initial Calibration

Non-Spiked Sample: C0526071.D

	Spike Sample	Spike Duplicate Sample
File ID :	C0526073.D	C0526074.D
Sample :	000523BLKS1,MS,	000523BLKS1,MSD,
Acq Time:	28 May 2000 5:40 am	28 May 2000 6:15 am

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
gamma-BHC	0.0	40	41	47	103	117	12#	9	50-127
Heptachlor	0.0	40	38	43	95	106	12	12	35-136
Aldrin	0.0	40	42	47	105	118	11	15	47-143
Dieldrin	0.0	80	83	93	104	117	12#	8	54-134
Endrin	0.0	80	82	90	102	112	9	16	61-138
4,4' -DDT	0.0	80	84	95	106	118	11	22	15-155

- Failed RPD limits. Batch validated by LCS passing.

QCBATCH#C008080S225

Reviewed/Approved by: Edgar Morrison Date: 06/09/00
Department Supervisor

Entech Analytical Labs, Inc.

CA ELAP # I-2346

525 Del Rey Avenue, Suite E, Sunnyvale, CA 94086 (408) 735-1550 FAX (408) 735-1554

Subcontract Chain of Custody

Subcontract Lab:	Project Name:	Date Sent:	Due Date:	PO Number:
ATL	20399	5/22/00	5/30/00	20399

Sample Number:	Customer Sample Number:	Matrix:	Test:	Method:	Collect Date:	Collec. Time	Bottle Type:	Preservative:
20399-007	S-26 1-1 1/2	Solid	EPA 8081-ATL	EPA 8081	5/9/00	5:00 PM	4 oz jar	
20399-008	S-26 2-2 1/2	Solid	EPA 8081-ATL	EPA 8081	5/9/00	5:00 PM	4 oz jar	

Relinquished By:	Received By:	Date:	Time:
Marco Gaisler	Golden State	5/22/00	18:00
Relinquished By:	Received By:	Date:	Time:
	Mark Galvan	5-23-00	0900
Relinquished By:	Received By:	Date:	Time:

Notes: Hold time up on 5/23/00!!

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

May 18, 2000

Doug Young
Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043

Order:	20391	**Date Collected:**	5/9/00
Project Name:	US Data Port 50-Acre Parcel	**Date Received:**	5/9/00
Project Number:	587-12F	**P.O. Number:**	
Project Notes:			

On May 09, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	EPA 8151-APCL	EPA 8151

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

May 31, 2000

Doug Young
Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043

Order:	20391	**Date Collected:**	5/9/00
Project Name:	US Data Port 50-Acre Parcel	**Date Received:**	5/9/00
Project Number:	587-12F	**P.O. Number:**	
Project Notes:			

On May 09, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	Arsenic	EPA 6010B
	EPA 8081-ATL	EPA 8081
	Lead	EPA 6010B

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attn: Dong Young

Date: 5/30/00
Date Received: 5/9/00
Project Name: US Data Port 50-Acre Parcel
Project Number: 587-12F
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 20391 **Lab Sample ID:** 20391-005 **Client Sample ID:** S-6 (1-1½)
Sample Time: **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Arsenic	27	5	1	5	mg/Kg	5/25/00	5/26/00	SM000524	EPA 6010B
Lead	14	5	1	5	mg/Kg	5/25/00	5/26/00	SM000524	EPA 6010B

Order ID: 20391 **Lab Sample ID:** 20391-006 **Client Sample ID:** S-6 (2-2½)
Sample Time: **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Arsenic	26	5	1	5	mg/Kg	5/25/00	5/26/00	SM000524	EPA 6010B
Lead	11	5	1	5	mg/Kg	5/25/00	5/26/00	SM000524	EPA 6010B

Order ID: 20391 **Lab Sample ID:** 20391-017 **Client Sample ID:** S-15 (1-1½)
Sample Time: **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Arsenic	24	5	1	5	mg/Kg	5/25/00	5/26/00	SM000524	EPA 6010B
Lead	8.6	5	1	5	mg/Kg	5/25/00	5/26/00	SM000524	EPA 6010B

Order ID: 20391 **Lab Sample ID:** 20391-018 **Client Sample ID:** S-15 (2-2½)
Sample Time: **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Arsenic	20	5	1	5	mg/Kg	5/25/00	5/26/00	SM000524	EPA 6010B
Lead	5.4	5	1	5	mg/Kg	5/25/00	5/26/00	SM000524	EPA 6010B

DF - Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

May 31, 2000

Doug Young
Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043

Order: 20420
Project Name: US Data Port 50-Acre Parcel
Project Number: 587-12F
Project Notes:

Date Collected: 5/10/00
Date Received: 5/10/00
P.O. Number:

On May 10, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	Arsenic	EPA 6010B
	EPA 8081-ATL	EPA 8081
	Lead	EPA 6010B

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346) If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043
Attn: Doug Young

Date: 5/31/00
Date Received: 5/10/00
Project Name: US Data Port 50-Acre Parcel
Project Number: 587-12F
P.O. Number:
Sampled By: John McCain

Certified Analytical Report

Order ID: 20420 **Lab Sample ID:** 20420-011 **Client Sample ID:** S-31 (1- 1 1/2')
Sample Time: **Sample Date:** 5/10/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Arsenic	36	5	1	5	mg/Kg	5/30/00	5/30/00	SM000526	EPA 6010B
Lead	120	5	1	5	mg/Kg	5/30/00	5/30/00	SM000526	EPA 6010B

Order ID: 20420 **Lab Sample ID:** 20420-012 **Client Sample ID:** S-31 (2-2 1/2')
Sample Time: **Sample Date:** 5/10/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Arsenic	ND	5	1	5	mg/Kg	5/30/00	5/30/00	SM000526	EPA 6010B
Lead	5.2	5	1	5	mg/Kg	5/30/00	5/30/00	SM000526	EPA 6010B

DF - Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL - Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

May 30, 2000 ELAP No.: 1838

Entech Analytical Labs, Inc.
525 Del Rey Avenue, Suite E,
Sunnyvale, CA 94086

ATTN: Michelle Anderson

Client's Project: 20420
Lab No.: 44186-001/002

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (562) 989 - 4045 if I can be of further assistance to your company.

Sincerely,

Cheryl De Los Reyes
Technical Operations Manager
CDR/jh

Enclosures

This cover letter is an integral part of this analytical report.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: 20420
Date Received: 05/23/00
Extraction Method: 3550B
Matrix: Solid
Units: ug/kg

Date Amended: 06/12/00

EPA Method 8081

Lab No.:	Method Blank	44186-001										
Client Sample I.D.:	–	20420-011 S-31 (1-1 1/2')										
Date Sampled:	–	05/10/00										
QC Batch #:	G008080S225	G008080S225										
Date Extracted:	05/23/00	05/23/00										
Date Analyzed :	05/30/00	05/31/00										
Analyst Initials:	NN	NN										
Dilution Factor:	1	1										

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Alpha-BHC	2	2	ND	2	ND								
Gamma-BHC (Lindane)	2	2	ND	2	ND								
Beta-BHC	2	2	ND	2	ND								
Heptachlor	2	2	ND	2	ND								
Delta-BHC	2	2	ND	2	ND								
Aldrin	2	2	ND	2	ND								
Heptachlor Epoxide	2	2	ND	2	ND								
Endosulfan I	2	2	ND	2	ND								
4,4'-DDE	4	4	ND	4	1210								
Dieldrin	4	4	ND	4	ND								
Endrin	4	4	ND	4	ND								
4,4'-DDD	4	4	ND	4	ND								
Endosulfan II	4	4	ND	4	ND								
4,4'-DDT	4	4	ND	4	ND								
Endrin Aldehyde	4	4	ND	4	ND								
Endosulfan Sulfate	4	4	ND	4	ND								
Methoxychlor	17	17	ND	17	ND								
gamma-Chlordane	2	2	ND	2	ND								
alpha-Chlordane	2	2	ND	2	ND								
Toxaphene	170	170	ND	170	ND								
Total Chlordane	17	4	ND	4	ND								

Surrogate Recovery

Surrogate	%Rec.	Limits	%Rec.	Limits								
Tetrachloro-m-xylene	103	30-150	DO	30-150								
Decachlorobiphenyl	150	30-150	DO	30-150								

MDL = Method Detection Limit
ND = Not Detected (Below DLR).
DLR = MDL X Dilution Factor
NA = Not Analyzed

DO = Diluted out

Reviewed/Approved By: E. Morrison for

Date: 06/12/00

Edgar Morrison
Organics Supervisor

The cover letter is an integral part of this analytical report.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: 20420
Date Received: 05/23/00
Extraction Method: 3550B
Matrix: Solid
Units: ug/kg

Date Amended: 06/12/00

EPA Method 8081

Lab No.:	44186-002											
Client Sample I.D.:	20420-012 S-31 (2-2 1/2')											
Date Sampled:	05/10/00											
QC Batch #:	G008080S225											
Date Extracted:	05/23/00											
Date Analyzed :	05/31/00											
Analyst Initials:	NN											
Dilution Factor:	1											
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Alpha-BHC	2	2	ND										
Gamma-BHC (Lindane)	2	2	ND										
Beta-BHC	2	2	ND										
Heptachlor	2	2	ND										
Delta-BHC	2	2	ND										
Aldrin	2	2	ND										
Heptachlor Epoxide	2	2	ND										
Endosulfan I	2	2	ND										
4,4'-DDE	4	4	4.7										
Dieldrin	4	4	ND										
Endrin	4	4	ND										
4,4'-DDD	4	4	ND										
Endosulfan II	4	4	ND										
4,4'-DDT	4	4	ND										
Endrin Aldehyde	4	4	ND										
Endosulfan Sulfate	4	4	ND										
Methoxychlor	17	17	ND										
gamma-Chlordane	2	2	ND										
alpha-Chlordane	2	2	ND										
Toxaphene	170	170	ND										
Total Chlordane	17	4	ND										

Surrogate Recovery

Surrogate	%Rec	Limits											
Tetrachloro-m-xylene	89	30-150											
Decachlorobiphenyl	145	30-150											

MDL = Method Detection Limit
ND = Not Detected (Below DLR).
DLR = MDL X Dilution Factor
NA = Not Analyzed

Reviewed/Approved By: Edgar Morrison
Organics Supervisor

Date: 06/12/00

The cover letter is an integral part of this analytical report.

Advanced Technology Laboratories
1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: 20420
Date Received: 05/23/00
Extraction Method: 3550B
Matrix: Solid
Units: ug/kg

EPA Method 8081

Lab No.:	LCS											
Client Sample I.D.:	–											
Date Sampled:	–											
QC Batch #:	G008080S225											
Date Extracted:	05/23/00											
Date Analyzed :	05/31/00											
Analyst Initials:	NN											
Dilution Factor:	1											
ANALYTE	MDL	%Rec	Limits	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Alpha-BHC	2	124	26-143										
Gamma-BHC (Lindane)	2	123	26-143										
Beta-BHC	2	106	26-143										
Heptachlor	2	111	26-143										
Delta-BHC	2	119	26-143										
Aldrin	2	115	26-143										
Heptachlor Epoxide	2	112	26-143										
Endosulfan I	2	111	26-143										
4,4'-DDE	4	117	26-143										
Dieldrin	4	118	26-143										
Endrin	4	123	26-143										
4,4'-DDD	4	115	26-143										
Endosulfan II	4	117	26-143										
4,4'-DDT	4	122	26-143										
Endrin Aldehyde	4	105	26-143										
Endosulfan Sulfate	4	127	26-143										
Methoxychlor	17	134	26-143										
gamma-Chlordane	2	113	26-143										
alpha-Chlordane	2	114	26-143										
Toxaphene	170	NS	NS										
Total Chlordane	17	NS	NS										

Surrogate Recovery

Surrogate	%Rec.	Limits									
Tetrachloro-m-xylene	78	30-150									
Decachlorobiphenyl	50	30-150									

NS = Not Spiked

MDL = Method Detection Limit
ND = Not Detected (Below DLR).
DLR = MDL X Dilution Factor
NA = Not Analyzed

Reviewed/Approved By: E. Morrison Jr. Date: 06/12/00

Edgar Morrison
Organics Supervisor

The cover letter is an integral part of this analytical report.

Spike Recovery and RPD Summary Report - SOIL(ug/kg)

Method : C:\HPCHEM\1\METHODS\8080526.M (Chemstation Integrator)
Title :
Last Update : Sat May 27 19:08:17 2000
Response via : Initial Calibration

Non-Spiked Sample: C0526071.D

	Spike Sample	Spike Duplicate Sample
File ID :	C0526073.D	C0526074.D
Sample :	000523BLKS1,MS,	000523BLKS1,MSD,
Acq Time:	28 May 2000 5:40 am	28 May 2000 6:15 am

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
gamma-BHC	0.0	40	41	47	103	117	12#	9	50-127
Heptachlor	0.0	40	38	43	95	106	12	12	35-136
Aldrin	0.0	40	42	47	105	118	11	15	47-143
Dieldrin	0.0	80	83	93	104	117	12#	8	54-134
Endrin	0.0	80	82	90	102	112	9	16	61-138
4,4' -DDT	0.0	80	84	95	106	118	11	22	15-155

- Failed RPD limits. Batch validated by LCS passing.

QCBATCH#C008080S225

Reviewed/Approved by: C. Bermudez for Date: 06/09/00
Edgar Morrison
Department Supervisor

Entech Analytical Labs, Inc.

CA ELAP # I-2346

525 Del Rey Avenue, Suite E, Sunnyvale, CA 94086 (408) 735-1550 FAX (408) 735-1554

Subcontract Chain of Custody

Subcontract Lab:	Project Name:	Date Sent:	Due Date:	PO Number:
ATL	20420	5/22/00	5/30/00	20-20

Sample Number:	Customer Sample Number:	Matrix:	Test:	Method:	Collect Date:	Collect Time	Bottle Type:	Preservative:
20420-011	S-31 (1-1 1/2')	Solid	EPA 8081-ATL	EPA 8081	5/10/00		4 oz jar	
20420-012	S-31 (2-2 1/2')	Solid	EPA 8081-ATL	EPA 8081	5/10/00		4 oz jar	

Relinquished By:	Received By:	Date:	Time:
Mara Gusles	Golden State	5/22/00	1800
Relinquished By:	Received By:	Date:	Time:
	Debbie Galvan	5-23-00	0900
Relinquished By:	Received By:	Date:	Time:

Notes: Hold time up on 5/24/00

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

June 20, 2000

Doug Young
Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043

Order:	20997	**Date Collected:**	5/13/00
Project Name:	US Data Port 50-Acre Parcel	**Date Received:**	5/15/00
Project Number:	587-12F	**P.O. Number:**	
Project Notes:			

On May 15, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	EPA 8081-Acculabs	EPA 8081

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

ACCULABS, INC.

Sample Log 21437
June 20, 2000

Michelle Anderson
Entech Analytical Labs, Inc.
525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

Subject : 2 Soil samples
Project Name : 20997
Project Number :
P.O. Number : 20997

Dear Ms. Anderson,

Chemical analysis on the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. USEPA protocols for sample storage and preservation were followed.

Acculabs - Davis is certified by the State of California (# 2330), the State of Arizona (AZ0583) and the State of Nevada. If you have any questions regarding procedures or results, please call me at 530-757-0920.

Sincerely,

Tom Kwoka

Tom Kwoka

1046 Olive Drive, Davis, California 95616
Telephone (530)757-0920 Fax (530)753-6091 www.acculabs.com

ACCULABS, INC.

Sample Log 21437
June 20, 2000

Subject : 2 Soil samples
Project Name : 20997
Project Number :
P.O. Number : 20997

Case Narrative

Analysis: EPA 8081A

Multiple dilutions are being reported for samples that have analytes whose concentration has exceeded the linear range of the GC curve. This allows for an accurate concentration of analytes which would be diluted out in the higher dilution.

Tom Kwoka

ACCULABS, INC.
Sample Log 21437
June 20, 2000

EPA 8081A

Sample Name : **S-52(1-1 1/2) (20997-001)**

Project Name : 20997
Project Number :
Sample Date : 05/13/00
Date Extracted : 06/19/00
Extr. Method : EPA 3550
QC Batch : PS000606

Date Analyzed : 06/20/00
Date Received : 06/19/00
Dilution : 1:1
Sample Matrix : Soil
Lab Number : 21437-01

Parameter	MRL	Measured Conc.	Units
alpha-BHC	**0.0050**	**0.12**	mg/Kg
gamma-BHC	0.0050	<0.0050	mg/Kg
beta-BHC	**0.0050**	**0.23**	mg/Kg
Heptachlor	0.0050	<0.0050	mg/Kg
delta-BHC	**0.0050**	**1.1 E**	mg/Kg
Aldrin	0.0050	<0.0050	mg/Kg
Heptachlor Epoxide	0.0050	<0.0050	mg/Kg
gamma-Chlordane	0.0050	<0.0050	mg/Kg
Endosulfan 1	0.0050	<0.0050	mg/Kg
alpha-Chlordane	0.0050	<0.0050	mg/Kg
Dieldrin	0.010	<0.010	mg/Kg
DDE	0.010	<0.010	mg/Kg
Endrin	0.010	<0.010	mg/Kg
Endosulfan 2	0.010	<0.010	mg/Kg
DDD	0.010	<0.010	mg/Kg
Endrin Aldehyde	0.010	<0.010	mg/Kg
DDT	0.010	<0.010	mg/Kg
Endosulfan Sulfate	0.010	<0.010	mg/Kg
Methoxychlor	0.050	<0.050	mg/Kg
Chlordane Technical	0.10	<0.10	mg/Kg
Toxaphene	**0.20**	**13 E**	mg/Kg
Tetrachloro-m-xylene (sur)		102	% Recovery
Decachlorobiphenyl (sur)		102	% Recovery

MRL = Method Reporting Limit

Conc. = Concentration

E = Concentration exceeded calibration range.

Approved By : Tom Kwoka

ACCULABS, INC.

Sample Log 21437
June 20, 2000

EPA 8081A

Sample Name : **S-52(1-1 1/2) (20997-001)**

Project Name	: 20997	Date Analyzed	: 06/20/00
Project Number	:	Date Received	: 06/19/00
Sample Date	: 05/13/00	Dilution	: 1:20
Date Extracted	: 06/19/00	Sample Matrix	: Soil
Extr. Method	: EPA 3550	Lab Number	: 21437-01
QC Batch	: PS000606		

Parameter	MRL	Measured Conc.	Units
alpha-BHC	0.10	< 0.10	mg/Kg
gamma-BHC	0.10	< 0.10	mg/Kg
beta-BHC	**0.10**	**0.24**	mg/Kg
Heptachlor	0.10	< 0.10	mg/Kg
delta-BHC	**0.10**	**1.2**	mg/Kg
Aldrin	0.10	< 0.10	mg/Kg
Heptachlor Epoxide	0.10	< 0.10	mg/Kg
gamma-Chlordane	0.10	< 0.10	mg/Kg
Endosulfan 1	0.10	< 0.10	mg/Kg
alpha-Chlordane	0.10	< 0.10	mg/Kg
Dieldrin	0.20	< 0.20	mg/Kg
DDE	0.20	< 0.20	mg/Kg
Endrin	0.20	< 0.20	mg/Kg
Endosulfan 2	0.20	< 0.20	mg/Kg
DDD	0.20	< 0.20	mg/Kg
Endrin Aldehyde	0.20	< 0.20	mg/Kg
DDT	0.20	< 0.20	mg/Kg
Endosulfan Sulfate	0.20	< 0.20	mg/Kg
Methoxychlor	1.0	<1.0	mg/Kg
Chlordane Technical	2.0	<2.0	mg/Kg
Toxaphene	**4.0**	**15**	mg/Kg
Tetrachloro-m-xylene (sur)		DIL OUT	% Recovery
Decachlorobiphenyl (sur)		DIL OUT	% Recovery

MRL = Method Reporting Limit

Conc. = Concentration

E = Concentration exceeded calibration range.

Approved By : Tom Kwoka

ACCULABS, INC.

Sample Log 21437
June 20, 2000

EPA 8081A

Sample Name : **S-52(2-2 1/2) (20997-002)**

Project Name	: 20997	Date Analyzed	: 06/20/00
Project Number	:	Date Received	: 06/19/00
Sample Date	: 05/13/00	Dilution	: 1:1
Date Extracted	: 06/19/00	Sample Matrix	: Soil
Extr. Method	: EPA 3550	Lab Number	: 21437-02
QC Batch	: PS000606		

Parameter	MRL	Measured Conc.	Units
alpha-BHC	**0.0050**	**0.011**	mg/Kg
gamma-BHC	0.0050	<0.0050	mg/Kg
beta-BHC	**0.0050**	**0.044**	mg/Kg
Heptachlor	0.0050	<0.0050	mg/Kg
delta-BHC	**0.0050**	**0.16**	mg/Kg
Aldrin	0.0050	<0.0050	mg/Kg
Heptachlor Epoxide	0.0050	<0.0050	mg/Kg
gamma-Chlordane	0.0050	<0.0050	mg/Kg
Endosulfan 1	0.0050	<0.0050	mg/Kg
alpha-Chlordane	0.0050	<0.0050	mg/Kg
Dieldrin	0.010	<0.010	mg/Kg
DDE	0.010	<0.010	mg/Kg
Endrin	0.010	<0.010	mg/Kg
Endosulfan 2	0.010	<0.010	mg/Kg
DDD	0.010	<0.010	mg/Kg
Endrin Aldehyde	0.010	<0.010	mg/Kg
DDT	0.010	<0.010	mg/Kg
Endosulfan Sulfate	0.010	<0.010	mg/Kg
Methoxychlor	0.050	<0.050	mg/Kg
Chlordane Technical	0.10	<0.10	mg/Kg
Toxaphene	**0.20**	**2.0 E**	mg/Kg
Tetrachloro-m-xylene (sur)		81	% Recovery
Decachlorobiphenyl (sur)		83	% Recovery

MRL = Method Reporting Limit

Conc. = Concentration

E = Concentration exceeded calibration range.

Approved By : Tom Kwoka

ACCULABS, INC.
Sample Log 21437
June 20, 2000

EPA 8081A

Sample Name : **S-52(2-2 1/2) (20997-002)**

Project Name : 20997
Project Number :
Sample Date : 05/13/00
Date Extracted : 06/19/00
Extr. Method : EPA 3550
QC Batch : PS000606

Date Analyzed : 06/20/00
Date Received : 06/19/00
Dilution : 1:5
Sample Matrix : Soil
Lab Number : 21437-02

Parameter	MRL	Measured Conc.	Units
alpha-BHC	0.025	< 0.025	mg/Kg
gamma-BHC	0.025	< 0.025	mg/Kg
beta-BHC	**0.025**	**0.036**	mg/Kg
Heptachlor	0.025	< 0.025	mg/Kg
delta-BHC	**0.025**	**0.14**	mg/Kg
Aldrin	0.025	< 0.025	mg/Kg
Heptachlor Epoxide	0.025	< 0.025	mg/Kg
gamma-Chlordane	0.025	< 0.025	mg/Kg
Endosulfan 1	0.025	< 0.025	mg/Kg
alpha-Chlordane	0.025	< 0.025	mg/Kg
Dieldrin	0.050	< 0.050	mg/Kg
DDE	0.050	< 0.050	mg/Kg
Endrin	0.050	< 0.050	mg/Kg
Endosulfan 2	0.050	< 0.050	mg/Kg
DDD	0.050	< 0.050	mg/Kg
Endrin Aldehyde	0.050	< 0.050	mg/Kg
DDT	0.050	< 0.050	mg/Kg
Endosulfan Sulfate	0.050	< 0.050	mg/Kg
Methoxychlor	0.25	< 0.25	mg/Kg
Chlordane Technical	0.50	< 0.50	mg/Kg
Toxaphene	**1.0**	**2.0**	mg/Kg
Tetrachloro-m-xylene (sur)		74	% Recovery
Decachlorobiphenyl (sur)		74	% Recovery

MRL = Method Reporting Limit

Conc. = Concentration

E = Concentration exceeded calibration range.

Approved By : Tom Kwoka

ACCULABS, INC.

Sample Log 21437
June 20, 2000

EPA 8081A

Sample Name : **Method Blank**

Project Name : 20997
Project Number :
Sample Date : 05/13/00
Date Extracted : 06/19/00
Extr. Method : EPA 3550
QC Batch : PS000606

Date Analyzed : 06/20/00
Date Received : 06/19/00
Dilution : 1:1
Sample Matrix : Soil
Lab Number : 21437-03

Parameter	MRL	Measured Conc.	Units
alpha-BHC	0.0050	<0.0050	mg/Kg
gamma-BHC	0.0050	<0.0050	mg/Kg
beta-BHC	0.0050	<0.0050	mg/Kg
Heptachlor	0.0050	<0.0050	mg/Kg
delta-BHC	0.0050	<0.0050	mg/Kg
Aldrin	0.0050	<0.0050	mg/Kg
Heptachlor Epoxide	0.0050	<0.0050	mg/Kg
gamma-Chlordane	0.0050	<0.0050	mg/Kg
Endosulfan 1	0.0050	<0.0050	mg/Kg
alpha-Chlordane	0.0050	<0.0050	mg/Kg
Dieldrin	0.010	<0.010	mg/Kg
DDE	0.010	<0.010	mg/Kg
Endrin	0.010	<0.010	mg/Kg
Endosulfan 2	0.010	<0.010	mg/Kg
DDD	0.010	<0.010	mg/Kg
Endrin Aldehyde	0.010	<0.010	mg/Kg
DDT	0.010	<0.010	mg/Kg
Endosulfan Sulfate	0.010	<0.010	mg/Kg
Methoxychlor	0.050	<0.050	mg/Kg
Chlordane Technical	0.10	<0.10	mg/Kg
Toxaphene	0.20	<0.20	mg/Kg
Tetrachloro-m-xylene (sur)		87	% Recovery
Decachlorobiphenyl (sur)		85	% Recovery

MRL = Method Reporting Limit

Conc. = Concentration

E = Concentration exceeded calibration range.

Approved By : Tom Kwoka

Acculabs Inc. - Davis

EPA 8081 QC Report

Matrix: Soil	Date Extracted: 6/19/00
QC Batch: PS000606	Date Analyzed: 6/20/00
QC Limits Set: 8/18/99	Spiked Sample ID : 21437-02 *

	Spike Conc	LCS	Matrix Spike	Matrix Spike Dup		Control Chart Limits	
Parameter	mg/kg	% Rec	% Rec	% Rec	RPD	Lower	Upper
gamma-BHC	0.050	77	117	110	6	62	117
Heptachlor	0.050	82	87	91	4	63	117
Aldrin	0.050	77	85	85	0	71	107
Dieldrin	0.100	88	151	124	20	68	117
Endrin	0.100	87	109	161	39	40	161
4,4'-DDT	0.100	66	218	157	33	43	128

	Control Chart Limits	
Surrogate Compounds	Lower	Upper
Tetrachloro-m-xylene	75	144
Decachlorobiphenyl	78	141

* Sample had a high concentration of toxaphene, which interfered with recovery for Dieldrin, Endrin, and DDT.

Tom Kwoka
Laboratory Director

C:\EXCEL\QC\Ps000606

Entech Analytical Labs, Inc.

CA ELAP # I-2346

525 Del Rey Avenue, Suite E, Sunnyvale, CA 94086 (408) 735-1550 FAX (408) 735-1554

Subcontract Chain of Custody

21487

Subcontract Lab:	Project Name:	Date Sent:	Due Date:	PO Number:
ACCULABS	20997	6/16/00	6/20/00	20997

	Sample Number:	Customer Sample Number:	Matrix:	Test:	Method:	Collect Date:	Collect Time:	Bottle Type:	Preservative:
01	20997-001	S-52(1-1½)	Solid	EPA 8081-Acculabs	EPA 8081	5/13/00		4 OZ JAR	
02	20997-002	S-52(2-2½)	Solid	EPA 8081-Acculabs	EPA 8081	5/13/00		4 OZ JAR	

Relinquished By:	Received By:	Date:	Time:
Amy Dombeck	Golden State	6/16/00	1800
Relinquished By:	Received By:	Date:	Time:
Golden State	Amy D. Lyon	6-17-00	1000
Relinquished By:	Received By:	Date:	Time:

Notes: 24 Hr. Rush!! Due6/20/00

Entech Analytical Labs, Inc.

CA ELAP # I-2346

525 Del Rey Avenue, Suite E, Sunnyvale, CA 94086 (408) 735-1550 FAX (408) 735-1554

Subcontract Chain of Custody

Subcontract Lab:	Project Name:	Date Sent:	Due Date:	PO Number:
ACCULABS	20997	6/16/00	6/20/00	20997

Sample Number:	Customer Sample Number:	Matrix:	Test:	Method:	Collect Date:	Collect Time:	Bottle Type:	Preservative:
20997-001	S-52(1-1½)	Solid	EPA 8081-Acculabs	EPA 8081	5/13/00		4 OZ JAR	
20997-002	S-52(2-2½)	Solid	EPA 8081-Acculabs	EPA 8081	5/13/00		4 OZ JAR	

Relinquished By:	Received By:	Date:	Time:
Amy Dombeck	Golden State	6/19/00	1300
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Notes: 24 Hr. Rush!! Due6/20/00

(2)

LOWNEY ASSOCIATES
CHAIN OF CUSTODY RECORD

Send Results To: ☒ Mountain View Office, 405 Clyde Avenue, Mountain View, CA 94043, 415-967-2365 ☐ Oakland Office, 129 Filbert Street, Oakland, CA 94607, 510-267-1970

Fax Copy To: ☒ 415-967-2785 (fax) ☐ 510-267-1972 (fax)

Project Name: US Data Port 50-Acre Parcel

Job Number: 587-12F

Report To: Doug Young

Sampler (print): John McCain

Sampler (signature): John McCain

QC Requirements:

☒ Level A (standard) ☐ Level B ☐ Level C ☐ Level D

Turnaround Requirements:

☐ 10 working days
☒ 5 working days
☐ 3 working days
☐ 48 hours
☐ 24 hours
☐ 2-3 hours (RUSH)

Analysis Requested

Sample I.D.	Date	Time	Sample Matrix	# of Cont.	Laboratory I.D.	Organo chlorine pesticides (8080)	Mercury, Arsenic	Selenium, Lead	chlorinated herbicides (8151)	organophosphorous pesticides (8141)	N-methyl-carbamates (8318)						Remarks
S-45 (0-½')[P]	5-13-00		soil		005	X	X	X									
S-45 (1-1½')[P]					024												Hold
S-45 (2-2½')[P]					025												Hold
S-46 (0-½')[P]					006	X	X	X									
S-46 (1-1½')[P]					026												Hold
S-46 (2-2½')[P]					027												Hold
S-51 (0-½')[P]				2✓	007	X	X	X	X	X	X						
S-51 (1-1½')				2✓	028	X	X	X	X	X	X	—	✓				11.1.1
S-51 (2-2½')[P]				2✓	029	X	X	X	X	X	X	—	✓				11.1.1
S-52 (0-½')[P]				1	006	X	X	X									
S-52 (1-1½')[P]				↓	030												Hold
S-52 (2-2½')[P]	↓		↓	↓	031												Hold

00 MAY 15 12:57

Relinquished By: John McCain Date: Time:

Relinquished By: Leo Rodriguez Date: 5/15/00 Time: 1245

Relinquished By: Date: Time:

Received By: Leo Rodriguez Date: 5/15/00 Time: 1230

Received By: Date: Time:

Lab of Record:

PM Initials:

Temperature:

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

July 07, 2000

Doug Young
Lowney Associates
405 Clyde Avenue
Mountain View, CA 94043

Order: 21243 **Date Collected:** 7/5/00
Project Name: US Data Port 55-Acre Lin/Hom Parcel **Date Received:** 7/5/00
Project Number: 587-12F **P.O. Number:**
Project Notes:

On July 05, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	EPA 8081-Acculabs	EPA 8081

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

ACCULABS, INC.

Sample Log 21492
July 07, 2000

Michelle Anderson
Entech Analytical Labs, Inc.
525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

Subject : 8 Soil Samples
Project Name :
Project Number : 21243

Dear Ms. Anderson,

Chemical analysis on the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. USEPA protocols for sample storage and preservation were followed.

Acculabs - Davis is certified by the State of California (# 2330), the State of Arizona (AZ0583) and the State of Nevada. If you have any questions regarding procedures or results, please call me at 530-757-0920.

Sincerely,

Tom Kwoka

1046 Olive Drive, Davis, California 95616
Telephone (530)757-0920 Fax (530)753-6091 www.acculabs.com

ACCULABS, INC.

Sample Log 21492
July 07, 2000

Subject : 8 Soil Samples
Project Name :
Project Number : 21243

Case Narrative

Analysis: EPA 8081A

The Decachlorobiphenyl surrogate recoveries for samples SS-1 @ 1-1 1/2 and SS3 @ 0-1/2 were below laboratory control chart limits due to the coloration of the sample extract.

Tom Kwoka

ACCULABS, INC.

EPA 8081A

Sample Log 21492
July 07, 2000

Sample Name : **SS-1 @ 0-1/2**

Project Name	:	Date Analyzed	: 07/06/00
Project Number	: 21243	Date Received	: 07/06/00
Sample Date	: 07/05/00	Dilution	: 1:1
Date Extracted	: 07/06/00	Sample Matrix	: Soil
Extr. Method	: EPA 3550	Lab Number	: 21492-01
QC Batch	: PS000702		

Parameter	MRL	Measured Conc.	Units
Toxaphene	0.20	<0.20	mg/Kg
Tetrachloro-m-xylene (sur)		104	% Recovery
Decachlorobiphenyl (sur)		99	% Recovery

MRL = Method Reporting Limit

Conc. = Concentration

E = Concentration exceeded calibration range.

Approved By : Tom Kwoka

ACCULABS, INC.
Sample Log 21492
July 07, 2000

EPA 8081A

Sample Name : **SS-1 @ 1-1 1/2**

Project Name	:	Date Analyzed	: 07/06/00
Project Number	: 21243	Date Received	: 07/06/00
Sample Date	: 07/05/00	Dilution	: 1:1
Date Extracted	: 07/06/00	Sample Matrix	: Soil
Extr. Method	: EPA 3550	Lab Number	: 21492-02
QC Batch	: PS000702		

Parameter	MRL	Measured Conc.	Units
Toxaphene	0.20	<0.20	mg/Kg
Tetrachloro-m-xylene (sur)		77	% Recovery
Decachlorobiphenyl (sur)		67	% Recovery

MRL = Method Reporting Limit
Conc. = Concentration
E = Concentration exceeded calibration range.

Approved By : Tom Kwoka

ACCULABS, INC.

Sample Log 21492
July 07, 2000

EPA 8081A

Sample Name : **SS2 @ 0-1/2**

Project Name	:	Date Analyzed	: 07/06/00
Project Number	: 21243	Date Received	: 07/06/00
Sample Date	: 07/05/00	Dilution	: 1:1
Date Extracted	: 07/06/00	Sample Matrix	: Soil
Extr. Method	: EPA 3550	Lab Number	: 21492-03
QC Batch	: PS000702		

Parameter	MRL	Measured Conc.	Units
Toxaphene	0.20	<0.20	mg/Kg
Tetrachloro-m-xylene (sur)		103	% Recovery
Decachlorobiphenyl (sur)		105	% Recovery

MRL = Method Reporting Limit

Conc. = Concentration

E = Concentration exceeded calibration range.

Approved By : Tom Kwoka

ACCULABS, INC.

Sample Log 21492
July 07, 2000

EPA 8081A

Sample Name : **SS2 @ 1-1 1/2**

Project Name	:	Date Analyzed	: 07/06/00
Project Number	: 21243	Date Received	: 07/06/00
Sample Date	: 07/05/00	Dilution	: 1:1
Date Extracted	: 07/06/00	Sample Matrix	: Soil
Extr. Method	: EPA 3550	Lab Number	: 21492-04
QC Batch	: PS000702		

Parameter	MRL	Measured Conc.	Units
Toxaphene	0.20	<0.20	mg/Kg
Tetrachloro-m-xylene (sur)		108	% Recovery
Decachlorobiphenyl (sur)		111	% Recovery

MRL = Method Reporting Limit
Conc. = Concentration
E = Concentration exceeded calibration range.

Approved By : Tom Kwoka

ACCULABS, INC.

Sample Log 21492
July 07, 2000

EPA 8081A

Sample Name : **SS3 @ 0-1/2**

Project Name	:	Date Analyzed	: 07/07/00
Project Number	: 21243	Date Received	: 07/06/00
Sample Date	: 07/05/00	Dilution	: 1:1
Date Extracted	: 07/06/00	Sample Matrix	: Soil
Extr. Method	: EPA 3550	Lab Number	: 21492-05
QC Batch	: PS000702		

Parameter	MRL	Measured Conc.	Units
Toxaphene	0.20	<0.20	mg/Kg
Tetrachloro-m-xylene (sur)		108	% Recovery
Decachlorobiphenyl (sur)		77	% Recovery

MRL = Method Reporting Limit

Conc. = Concentration

E = Concentration exceeded calibration range.

Approved By : Tom Kwoka

ACCULABS, INC.

EPA 8081A

Sample Log 21492
July 07, 2000

Sample Name : **SS3 @ 1-1 1/2**

Project Name	:	Data Analyzed	: 07/07/00
Project Number	: 21243	Date Received	: 07/06/00
Sample Date	: 07/05/00	Dilution	: 1:1
Date Extracted	: 07/06/00	Sample Matrix	: Soil
Extr. Method	: EPA 3550	Lab Number	: 21492-06
QC Batch	: PS000702		

Parameter	MRL	Measured Conc.	Units
Toxaphene	0.20	<0.20	mg/Kg
Tetrachloro-m-xylene (sur)		119	% Recovery
Decachlorobiphenyl (sur)		98	% Recovery

MRL = Method Reporting Limit

Conc. = Concentration

E = Concentration exceeded calibration range.

Approved By : Jerry D. Ferguson for
Tom Kwoka

ACCULABS, INC.

Sample Log 21492
July 07, 2000

EPA 8081A

Sample Name : **SS4 @ 0-1/2**

Project Name	:	Date Analyzed	: 07/07/00
Project Number	: 21243	Date Received	: 07/06/00
Sample Date	: 07/05/00	Dilution	: 1:1
Date Extracted	: 07/06/00	Sample Matrix	: Soil
Extr. Method	: EPA 3550	Lab Number	: 21492-07
QC Batch	: PS000702		

Parameter	MRL	Measured Conc.	Units
Toxaphene	0.20	<0.20	mg/Kg
Tetrachloro-m-xylene (sur)		105	% Recovery
Decachlorobiphenyl (sur)		97	% Recovery

MRL = Method Reporting Limit
Conc. = Concentration
E = Concentration exceeded calibration range.

Approved By : Tom Kovoka

ACCULABS, INC.

Sample Log 21492
July 07, 2000

EPA 8081A

Sample Name : **SS4 @ 1-1 1/2**

Project Name	:	Date Analyzed	: 07/07/00
Project Number	: 21243	Date Received	: 07/06/00
Sample Date	: 07/05/00	Dilution	: 1:1
Date Extracted	: 07/06/00	Sample Matrix	: Soil
Extr. Method	: EPA 3550	Lab Number	: 21492-08
QC Batch	: PS000702		

Parameter	MRL	Measured Conc.	Units
Toxaphene	0.20	<0.20	mg/Kg
Tetrachloro-m-xylene (sur)		100	% Recovery
Decachlorobiphenyl (sur)		80	% Recovery

MRL = Method Reporting Limit
Conc. = Concentration
E = Concentration exceeded calibration range.

Approved By : Tom Kwoka

ACCULABS, INC.

Sample Log 21492
July 07, 2000

EPA 8081A

Sample Name : **Method Blank**

Project Name	:	Date Analyzed	: 07/06/00
Project Number	: 21243	Date Received	: 07/06/00
Sample Date	: 07/05/00	Dilution	: 1:1
Date Extracted	: 07/06/00	Sample Matrix	: Soil
Extr. Method	: EPA 3550	Lab Number	: 21492-09
QC Batch	: PS000702		

Parameter	MRL	Measured Conc.	Units
Toxaphene	0.20	<0.20	mg/Kg
Tetrachloro-m-xylene (sur)		108	% Recovery
Decachlorobiphenyl (sur)		109	% Recovery

MRL = Method Reporting Limit
Conc. = Concentration
E = Concentration exceeded calibration range.

Approved By : Tom D. Kwoka for
Tom Kwoka

ACCULABS, INC.

Acculabs Inc. - Davis

EPA 8081 QC Report

Matrix:	Soil	Date Extracted:	7/6/00
QC Batch:	PS000702	Date Analyzed:	7/6/00
QC Limits Set:	8/18/99	Spiked Sample ID :	21492-01

	Spike Conc	LCS	Matrix Spike	Matrix Spike Dup		Control Chart Limits	
Parameter	mg/kg	% Rec	% Rec	% Rec	RPD	Lower	Upper
gamma-BHC	0.050	108	110	64	53	62	117
Heptachlor	0.050	114	112	68	49	63	117
Aldrin	0.050	106	106	67	45	71	107
Dieldrin	0.100	117	135	75	57	68	117
Endrin	0.100	121	133	76	55	40	161
4,4'-DDT	0.100	112	93 *	32 *	#VALUE!	43	128

	Control Chart Limits	
Surrogate Compounds	Lower	Upper
Tetrachloro-m-xylene	75	144
Decachlorobiphenyl	78	141

* Sample 21492-01 had high concentrations of DDT which interfered with matrix spike and duplicate recoveries for DDT. Also, matrix spike duplicate had a small loss of sample during the extraction process which resulted in low recoveries. LCS was within limits.

Tom Kwoka
Laboratory Director

C:\EXCEL\QC\Ps000702

LOWNEY ASSOCIATES
CHAIN OF CUSTODY RECORD

SEND RESULTS TO:

☒ Mountain View Office
405 Clyde Ave
Mountain View, Ca 94043
415-967-2365
FAX COPY: ☒ 415-967-2785 (FAX)

☐ Walnut Creek Office
1600 S. Main St, Suite 125
Walnut Creek, Ca 94596
510-938-9356
FAX COPY: ☐ 510-938-9359 (FAX)

Project Name: US DataPort 55-Acre Lin/Hom Parcel

Job No.: 587-12F

Report To: Doug Young / James Kiernan

Sampler (print): James Kiernan

Sampler (signature):

QC Requirements:
☑ Level A (standard) ☐ Level B ☐ Level C ☐ Level D

Turnaround Requirements:
☐ 10 Working days
☐ 5 Working days
☐ 3 Working days
☒ 48 Hours
☐ 24 Hours
☐ 2-3 Hours (RUSH)

ANALYSIS REQUESTED

Sample I.D.	Date	Time	Lab I.D.	Sample Matrix	No. of Cont.	TPHgas/BTEX (8015/8020)	TPH as diesel (8015M)	TRPH (5520) E/F/B/F	Halogenated VOCs (8010)	Purgeable Organics (8240)	Extractable Organics (8270)	Total phene only (8081)						Remarks
SS-1 @ 0-½'	7/5/00			Soil	1					X			2	1	2	4	3	001
SS-1 @ 1-1½'										X								002
SS-2 @ 0-½'										X								003
SS-2 @ 1-1½'										X								004
SS-3 @ 0-½'										X								005
SS-3 @ 1-1½'										X								006
SS-4 @ 0-½'										X								007
SS-4 @ 1-1½'										X								008

48 HR RUSH

Relinquished By: [signature] Date: 7/5/00 Time: 1100

Relinquished By: Date: Time:

Relinquished By: Date: Time:

Received By: [signature] Date: 7/5/00 Time: 1107

Received By: Date: Time:

Lab Of Record:

PM Initial:

Temperature:

Jul. 7. 2000 11:45AM No. 0011 P. 15/15