★ Stellar Environmental Solutions

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Geoscience & Engineering Consulting

July 21, 2000

Mr. Jonathan Redding
Wendel, Rosen, Black & Dean
1111 Broadway, 24th Floor
Oakland, CA 94607-4036

Subject: Residual Risk Management Plan –
2144 Alvarado Street, San Leandro, California

Dear Mr. Redding:

Stellar Environmental Solutions (SES) is pleased to submit this Residual Risk Management Plan (RRMP) for the site located at 2144 Alvarado Street in San Leandro, Alameda County, California. This RRMP is being submitted to you as attorney-in-fact for the property owners (the Coffels). This RRMP is based on the findings of contaminant investigations and remediation conducted by SES and others at the subject property in 1998 and 1999. While the majority of known pesticide-contaminated soil was removed for offsite disposal, residual pesticide contamination has been documented, and additional areas of undocumented shallow soil contamination could exist. This RRMP is prepared in accordance with Alameda County Health Care Services Agency (ACHCSA) guidelines, and is designed to ensure that any future site development activities that encounter residual soil contamination is conducted in a manner that is protective of human health and the environment. On July 21, 2000 Ms. Eva Chu of ACHCSA provided SES with verbal approval of this document.

Please call me directly (510-644-3123) if you have any questions.

Sincerely,

Bruce M. Rucker

Bruce M. Rucker, R.G., R.E.A.
Project Manager

cc: Eva Chu, Alameda County Health Care Services Agency

RESIDUAL RISK MANAGEMENT PLAN

2144 ALVARDO STREET
SAN LEANDRO, CALIFORNIA

Prepared for

WENDEL, ROSEN, BLACK & DEAN
1111 BROADWAY, 24TH FLOOR
OAKLAND, CALIFORNIA

Prepared by

STELLAR ENVIRONMENTAL SOLUTIONS
2198 SIXTH STREET
BERKELEY, CALIFORNIA 94710

July 21, 2000

Project No. 2000-31

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TABLES AND FIGURES (ATTACHMENT A)

1.0 SUMMARY OF PREVIOUS INVESTIGATIONS AND CONCLUSIONS

SITE DESCRIPTION

The subject property is located at 2144 Alvarado Street in San Leandro, Alameda County, California. The site is an approximately 8,950-square foot parcel (210 feet long by 42 feet wide) containing a 1-story building that is presently used in its entirety as an office, two storage sheds, a covered parking area, and a paved courtyard and driveway. Two small grassy areas are located in the front of the parcel between the building and the sidewalk. Figure 1 (Attachment A) shows the regional site location and Figure 2 shows the site layout.

PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

In connection with the proposed sale of the property and obtaining financing, routine site investigations were conducted in 1998 (Kennedy/Jenks Consultants, 1998), which were followed by more thorough investigations in 1999 (Stellar Environmental Solutions 1999a and 1999b), to assess the extent of possible soil and groundwater contamination at this property. A total of 18 soil samples and one grab-groundwater sample were taken from 15 locations. The investigations were focused in the commercial area of the property (behind the office structure) because this was the area in which the pest control companies had been operating and in which there were several storage sheds containing pesticides which had been used by prior businesses on the property that operated from approximately 1964 to date. As a result of these investigations, four localized areas were identified which contained four pesticides (including chlordane, DDE, DDT and heptachlor) which exceeded regulatory agency screening criteria. Soil concentrations decreased significantly with increasing depth and the grab-groundwater sample collected immediately downgradient (west) of the area with the highest detected soil contamination contained no detectable pesticides. Accordingly, groundwater contamination was dismissed as an issue at the site. The primary issue was the extent to which soil contamination existed, primarily in the surface and near surface soils in the rear portion of the site.

As a result of the soil assessment activities, four areas were identified for remediation. Remediation was completed in 1999 by removal of contaminated soil. Although the remediation was not entirely successful in removing all the contaminated soil, it appears to have been effective in removing the most highly elevated contaminant concentrations in soil. Table 1

(Attachment A) summarizes the analytical results of the previous investigations, as well as samples representing soil that was not subsequently excavated. Figures 2 through 4 (Attachment A) show sampling locations and excavation areas.

EXTENT AND MAGNITUDE OF RESIDUAL SOIL CONTAMINATION

As shown in Attachment A, residual organochlorine pesticide contamination in shallow soils has been documented in several locations. Two areas (Excavations B and D) have contamination in excess of the site-specific cleanup goals (USEPA PRGs for residential land use). Residual contamination in all other areas is below the cleanup goals, but at concentrations that could pose a health impact to construction workers who encounter the soil, and excavated soil could require disposal at a permitted landfill.

Based on this removal project, and based on the history of use of pesticides at the site, it is our professional opinion that there is only minimal residual contamination at the site, which poses no risk to occupants of the site. Further, it is important to note that we have no reason to believe that there is contamination in the front portion of the site. Residual risks exist only in the event of excavation below the pavement cap at the back portion of the site, and these risks can be minimized by taking routine precautions.

2.0 PURPOSE OF RESIDUAL RISK MANAGEMENT PLAN

Although most of the accessible and highly contaminated soil has been removed from the site, in several known locations, the soil removal project did not completely succeed in reducing the levels of contaminants to below the U.S. EPA's Preliminary Remediation Goals (PRGs) for residential use. However, in all locations, the soil concentration levels have been reduced to below the PRGs for commercial and industrial usage.

This Residual Risk Management Plan (RRMP) has been prepared to address residual contamination of shallow site soils by organochlorine pesticides. The RRMP provides sufficient information such that future site development activities encountering shallow soils are conducted in conformance with environmental regulations and in a manner protective of human health. The RRMP includes discussion of the following elements:

- Site description;
- Summary of previous investigations and remedial activities;

- Extent and magnitude of residual soil contamination;
- Potential human health risks associated with residual soil contamination;
- Activities likely to intercept residual contamination, and procedures to minimize human exposure;
- Buyer notification language; and
- Contact information for responsible parties

3.0 HUMAN HEALTH RISK CONSIDERATIONS

The detected contaminants are in a class of pesticides known as chlorinated hydrocarbon insecticides or organochlorine pesticides, and are known or probable human carcinogens. Chlordane is in the cyclodiene class of pesticides (Morrill et al., 1982) and has a reported range of half-lives in soils of 283 days to 3.8 years (Howard et al., 1991). The DDD, DDE, and DDT congeners have a reported range of half-lives in soil of 2 years to 15.6 years (Howard et al., 1991). All these pesticides are somewhat resistant to biodegradation, but can be environmentally degraded by several different pathways, including epoxidation of the non-chlorinated ring, dehydrochlorination, oxidation/hydroxylation, and reductive dechlorination (occurs under anaerobic conditions only) (Morrill et al., 1982). Molecular rearrangements through reactions mediated by microbes may also occur. Degradation products can be more toxic than the original compounds. Factors that are reported to increase the rate of environmental degradation of DDT include decreased oxygen content and increasing temperature, soil moisture, organic matter content, and pH. Increasing depth of placement has also been cited as inhibiting pesticide degradation, likely due to decreased microbial activity, organic content, and clay content (Morrill et al., 1982).

Because these compounds are non-volatile and areas of documented or potential residual soil contamination are wholly capped, there is no potential for human exposure at the surface unless the cap is removed.

The only possible routes of human exposure include:

- Dermal or eye contact with contaminated soil;
- Ingestion of contaminated soil; and

- Inhalation of fugitive dust with adorbed contaminant particles.

Table 2 summarizes the routes of exposure and symptoms indicative of exposure. Activities that could be reasonably expected to result in human exposure, and appropriate measures to be taken to reduce exposure, are discussed in subsequent sections.

4.0 ACTIVITIES LIKELY TO ENCOUNTER RESIDUAL CONTAMINATION AND PROCEDURES TO MINIMIZE HUMAN EXPOSURE

This section discusses potential future activities that are likely to encounter residual contamination, and procedures to be taken to minimize human exposure. As discussed previously, the only possible pathways for human exposure to the residual soil contamination are inhalation of fugitive dust, soil ingestion, and skin/eye contact.

ACTIVITIES LIKELY TO ENCOUNTER RESIDUAL CONTAMINATION

While we know of no proposed plans for site redevelopment, future activities that could reasonably be anticipated to occur that could encounter residual soil contamination in the back portion of the property include:

1. Removal of the current asphalt or concrete cap for any reason;
2. Trenching for underground utilities installation, repair, or removal;
3. Excavation for foundations or other structures; and
4. Digging into the soil for landscaping.

Procedures to be implemented to minimize the potential for human exposure to residual soil contamination include the following.

WORKER NOTIFICATION

Any workers that may be exposed to chemicals with health risks (i.e., residual soil contamination) should be notified of the potential risk and procedures for personal protection in the event that the workers are performing tasks discussed in items 1 to 4 above. This requirement can be accomplished by providing workers with a copy of this RRMP.

Depending upon the extent and duration of excavation beneath the cap, any company conducting work which might encounter residual soil contamination may elect to prepare and implement a site-specific Health and Safety Plan (HASP) to further minimize potential human health exposure to residual site contamination. Elements of a HASP are specified in State of California and federal Occupational Health and Safety Administration (OSHA) regulations [29 CFR 1910.120(j)]. It is quite likely, however, that routine precautions will be be suffient to mitigate human health exposure. These routine precautions generally consist of wearing appropriate PPE and site control/dust elimination, as discussed below.

WEARING APPROPRIATE PPE

Appropriate PPE to minimize the potential for human exposure to the residual soil contamination includes impermeable boots, gloves, and coveralls (to prevent skin absorption pathway of exposure) and full-covering safety glasses (to prevent eye contact pathway of exposure). As discussed below, respiratory protection should not be needed because site control measures are more appropriate than PPE for preventing the inhalation pathway of exposure.

SITE CONTROL/DUST ELIMINATION

Inhalation of fugitive dust with adsorbed contamination (ingestion) is the primary potential pathway of human exposure. Activities that generate visible fugitive dust are therefore likely to result in human exposure. Fugitive dust can be easily controlled by wetting the soil before and during soil disturbance activities.

Any excess contaminated soil that is excavated and not immediately offhauled should be fully covered or containerized to ensure that it neither enters the environment nor is a vector for human exposure.

Another important site control measure is to cordon off the work area to exclude all non-essential personnel (e.g., bystanders) who do not have the appropriate training or PPE to minimize exposure.

5.0 OTHER SITE MANAGEMENT ISSUES

This section discusses other site management issues that are not directly human health-related. These include buyer notification, proper offsite soil disposal, and criteria for additional sampling and analysis.

BUYER NOTIFICATION

In accordance with ACDEH requirements and real estate disclosure laws, potential buyers of the subject property must be notified of the residual soil contamination. The disclosure must contain information regarding the nature and extent of residual contamination, and must reference the various reports that contain the site-specific chemical data and associated potential human health risks. The disclosure must also specify that future property owners will be responsible for adhering to the tenets of this RRMP.

PROPER OFFSITE SOIL DISPOSAL

Future site activities could generate soil requiring offsite disposal, therefore excavation activities should be minimized. Excavated soils could contain pesticides at concentrations that require transport by and disposal at appropriately licensed and permitted firms. Following soil excavation and stockpiling of excess soil, if any, representative samples of the soil to be offhauled should be collected and analyzed for the constituents of concern. If the waste soil is deemed hazardous (by State of California or federal regulations), it can only be transported by a licensed hazardous waste hauler to a permitted hazardous waste facility. If the waste soil is contaminated at non-hazardous levels, it should only be disposed of or treated at a facility permitted to accept contaminated soil. Records of all waste sampling, analysis, transport, and disposal should be retained by the property owner.

CRITERIA FOR ADDITIONAL SAMPLING/ANALYSIS

The lead regulatory agency – ACHCSA – has stipulated that they require no additional sampling/analysis associated with any site redevelopment activities, as long as the site use remains non-residential. Additional sampling and analysis for pesticides will be required if both the following occur:

1. If site use changes to residential; and

2. If the impermeable cap over former excavation areas B or D (areas with residual pesticide concentrations above residential PRGs) is removed and not immediately replaced.

If these areas are left unpaved and re-sampling and analysis indicate soil concentrations remain above residential PRGs, ACHCSA may require that the soil be tilled to reduce pesticide concentrations, or that the contaminated soil be removed.

6.0 CONTACT INFORMATION FOR RESPONSIBLE PARTIES

As of July 2000, contact information for site responsible parties includes:

Property Owner: Donald L. & Beth A. Coffel
7808 Frances Drive
Alexandria, VA 22306-2820

Regulatory Agencies

Alameda County Health Care Services Agency - Hazardous Materials Division
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502
Attention: Ms. Eva Chu
Telephone: (510) 567-6700

City of San Leandro Fire Prevention – Environmental Services Department
835 E. 14th Street
San Leandro, CA 94577
Attention: Mr. Karl Busche
Telephone: (510) 577-3316

7.0 REFERENCES

Howard, P.H., R.S. Boethling, W.F. Jarvis, W.M. Meylan, and E.M. Michalenko, 1991. Handbook of Environmental Degradation Rates, Lewis Publishers, 725 pp.

Kennedy/Jenks Consultants, 1998. Investigation Report – 2144 Alvarado Street, San Leandro, California. November 4

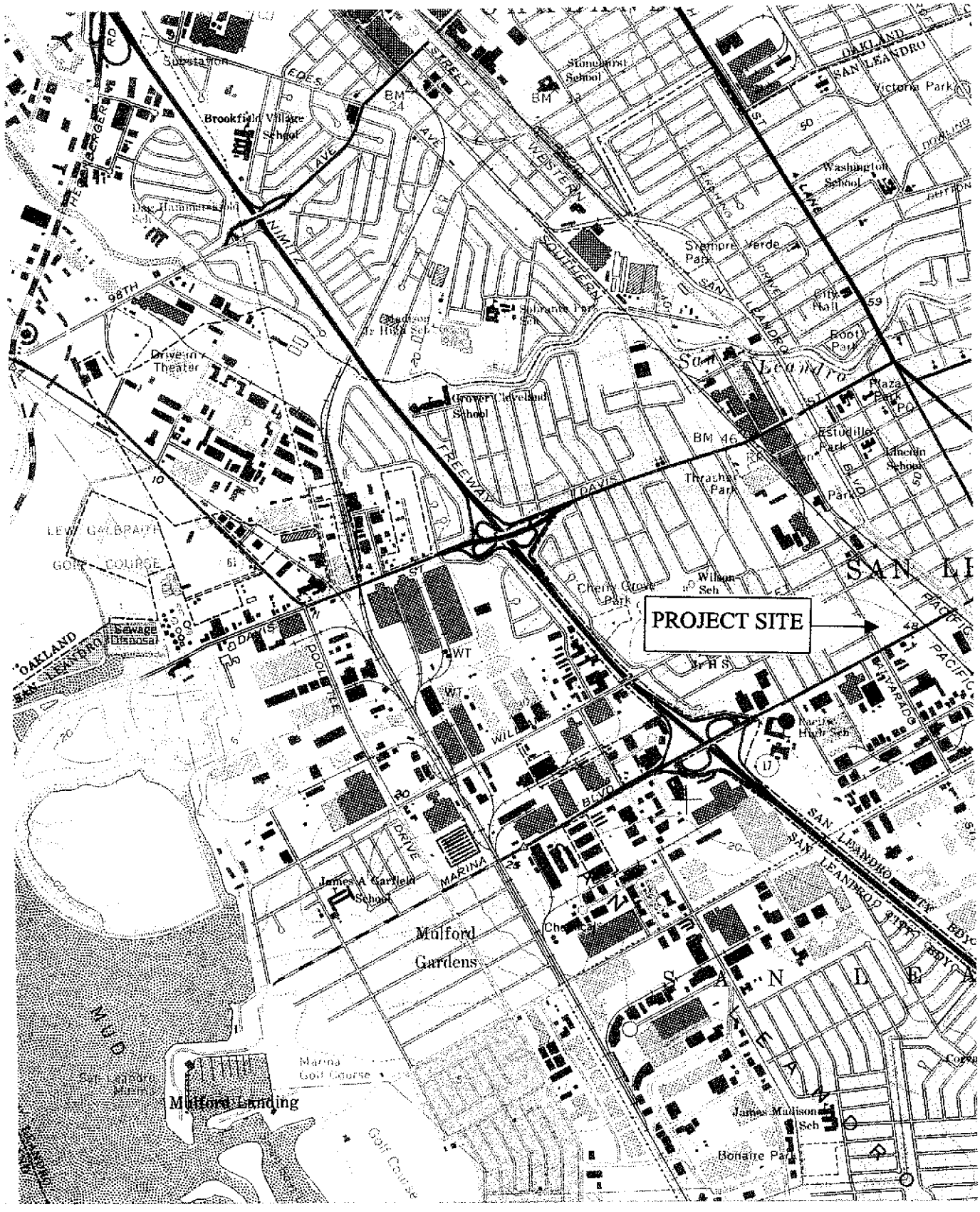
Morrill, L.G., B.C. Mahilum, and S.H. Mohiuddin, 1982. Organic Compounds in Soils: Sorption, Degradation and Persistence, Ann Arbor Science, 326 pp.

Stellar Environmental Solutions, 1999a. Phase II Environmental Site Investigation, 2144 Alvarado Street, San Leandro, California. January 15.

Stellar Environmental Solutions, 1999b. Soil Remediation Report, 2144 Alvarado Street, San Leandro, California. September 10.

ATTACHMENT A

Figures and Tables



SITE LOCATION ON U.S.G.S. TOPOGRAPHIC MAP

Coffel Property,
2144 Alvarado St., San Leandro

By: MJC | JANUARY 1999

Figure 1

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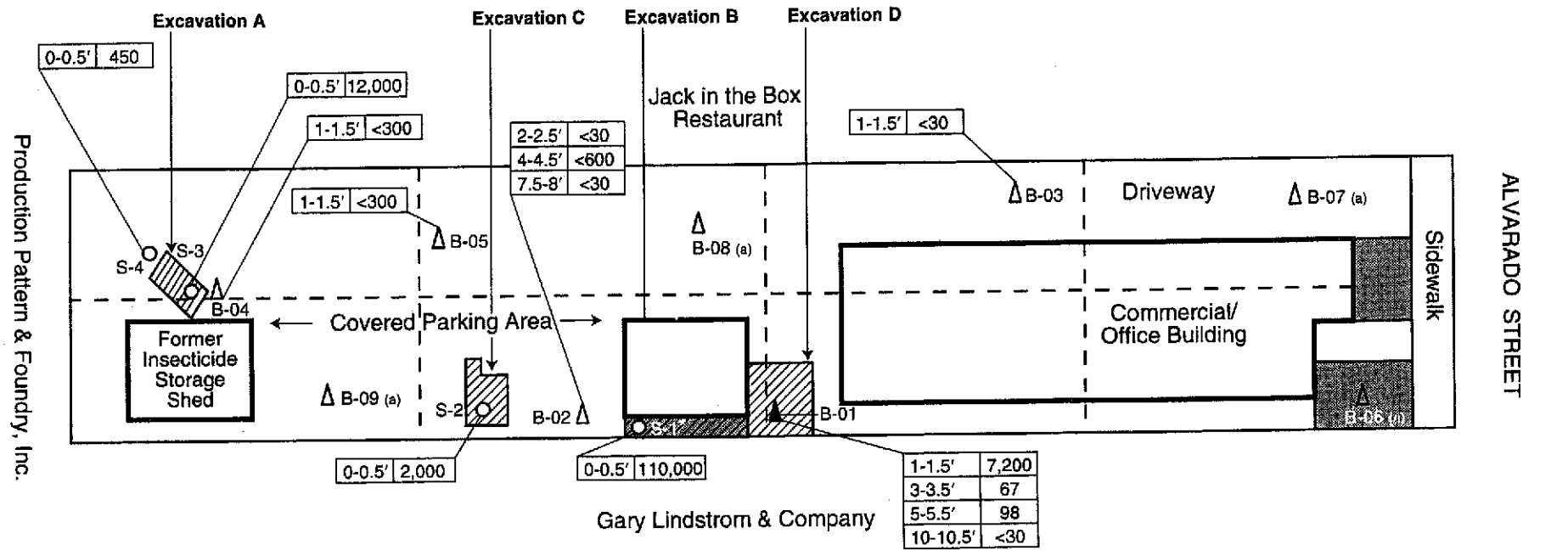

LEGEND

- ○S-2 K/JC Soil Sample (Oct. 1998)
- Δ B-05 Feb. 1999 SES Exploratory Bore (Soil Sample Only)
- ▲ B-01 Feb. 1999 SES Exploratory Bore (Soil and Groundwater Sample)
- Unpaved Area
- 0-0.5' | 450 Chlordane concentration (µg/kg) and depth of soil sample (feet)

"<" designation indicates concentration less than detection limit

* Location incorrect on previous investigation report's figure

- Area of excavation
- Grid overlay for selection of March 1999 4-point composite soil sample "Comp B06/ B07/B08/B09"
- (a) 4-point composite soil sample "Comp B06/ B07/B08/B09" contained 300µg/kg chlordane

0 25

APPROXIMATE SCALE: 1" = 25 FEET

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Areas of Excavation and Previous Investigation Chlordane Analytical Results

2144 Alvarado Street, San Leandro, CA

Figure 2

by: MJC | JULY 1999

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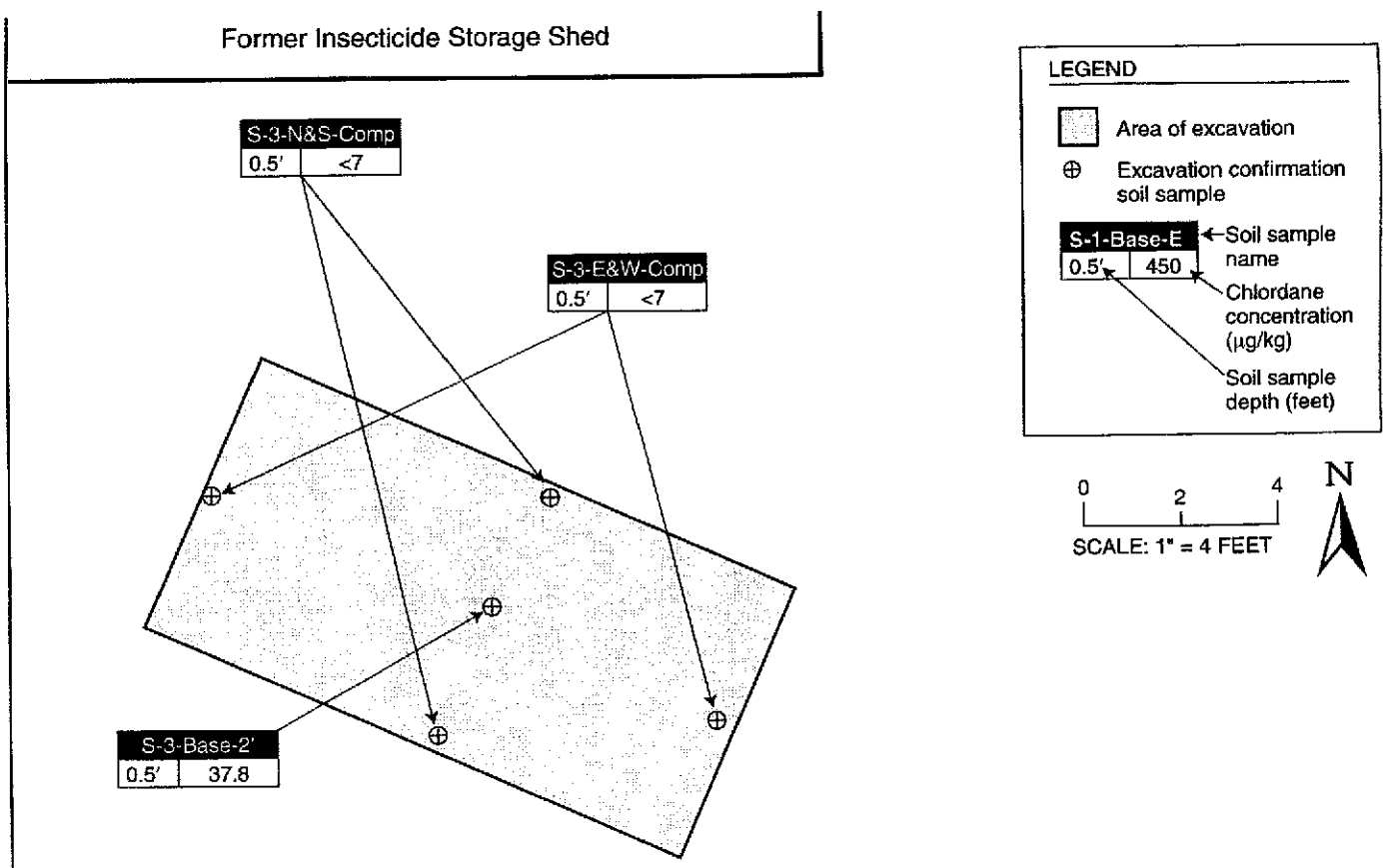
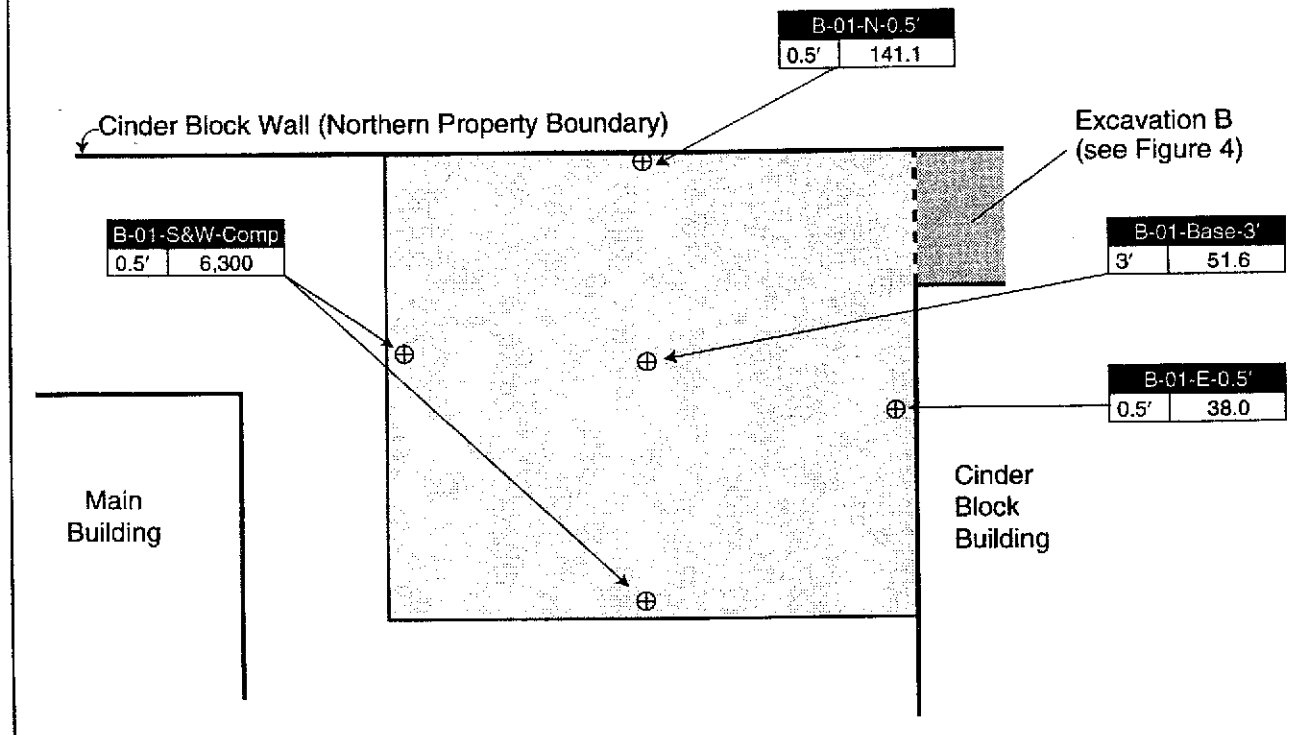


EXCAVATION A



EXCAVATION D

N

Excavations A and D—Residual Soil Chlordane Analytical Results

2144 Alvarado Street
San Leandro, CA

By: MJC | JULY 1999

Figure 3

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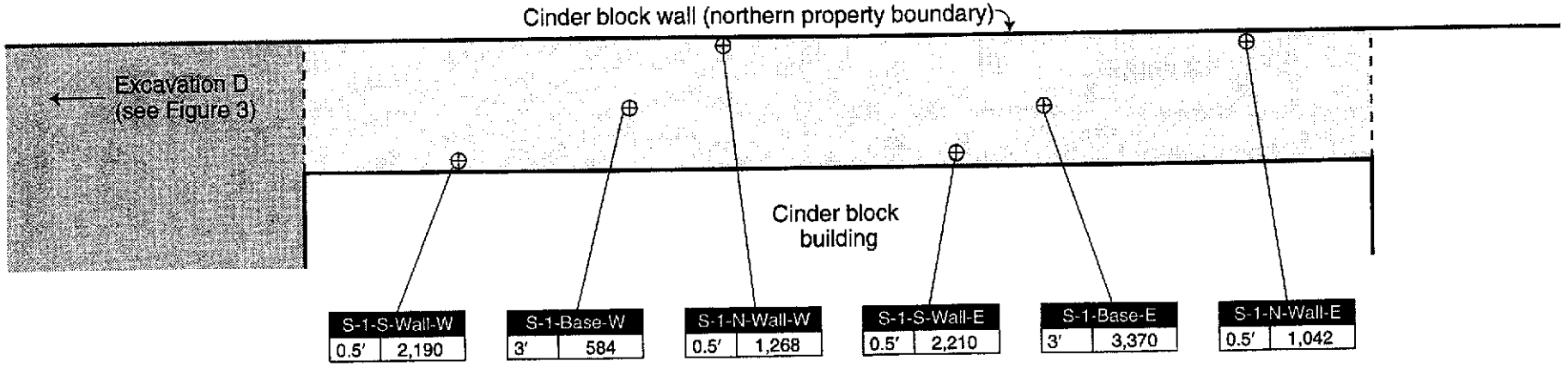
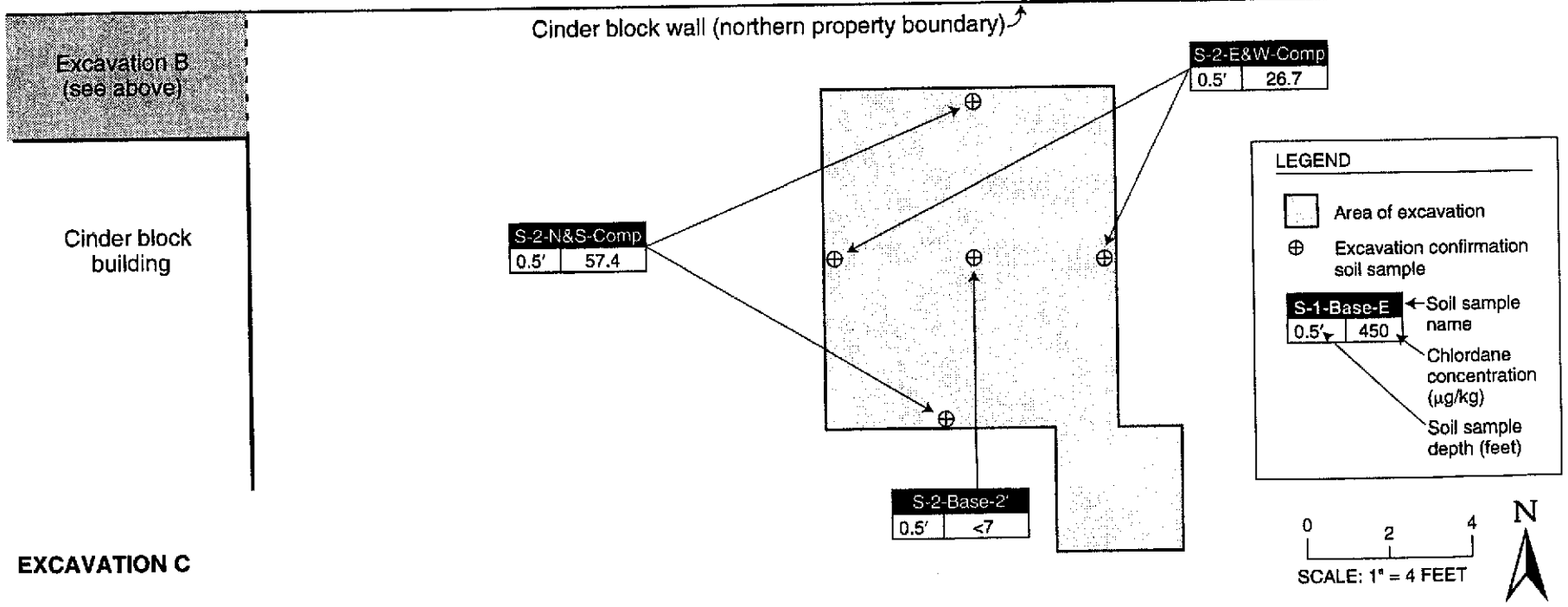


EXCAVATION B



EXCAVATION C

★ Stellar Environmental Solutions Geoscience & Engineering Consulting	Excavations B and C — Residual Soil Chlordane Analytical Results 2144 Alvarado Street, San Leandro, CA	**Figure 4** by: MJC — JULY 1999

Table 1
Residual Soil Sample Soil Analytical Results
2144 Alvarado Street - San Leandro, California
(all concentrations in µg/Kg)

Sample I.D.	Sample Type	Sample Depth (feet bgs)	Chlordane	4,4-DDD	4,4-DDE	4,4-DDT	Heptachlor
Pre-Remediation Phase (October and December 1998)							
S-4A	Discrete location	0 to 0.5	450	< 60	< 60	< 60	< 30
B-01-3'	Discrete location	3.0 to 3.5	67	< 6	< 6	< 6	< 3
B-01-5'	Discrete location	5.0 to 5.5	98	< 6	< 6	< 6	< 3
B-01-10'	Discrete location	10.0 to 10.5	< 30	< 6	< 6	< 6	< 3
B-02-2'	Discrete location	2.0 to 2.5	< 30	< 6	< 6	< 6	< 3
B-02-4'	Discrete location	4.0 to 4.5	< 600	< 120	< 120	< 120	< 60
B-02-7.5'	Discrete location	7.5 to 8.0	< 30	< 6	< 6	< 6	< 3
B-03-1'	Discrete location	1.0 to 1.5	< 30	< 6	< 6	< 6	< 3
B-04-1.5'	Discrete location	1.5 to 2.0	< 300	< 60	< 60	< 60	< 30
B-05-1'	Discrete location	1.0 to 1.5	< 300	< 60	< 60	< 60	< 30
1999 Remediation Phase - Excavation Area A							
S-3-Base-2'	Single excavation base	2'	37.8	< 6	< 6	< 6	< 1
S-3-N&S-Comp.	2-point sidewall composite	0.5'	< 7	< 6	< 6	< 6	< 1
S-3-E&W-Comp.	2-point sidewall composite	0.5'	< 7	< 6	< 6	< 6	< 1

(Table continued on next page)

Table 1 *continued*

Sample I.D.	Sample Type	Sample Depth (feet bgs)	Chlordane	4,4-DDD	4,4-DDE	4,4-DDT	Heptachlor
1999 Remediation Phase – Excavation Area B							
S-1-S-Wall-W	Single sidewall	0.5'	**2,190**	< 120	< 120	< 120	98.2
S-1-N-Wall-W	Single sidewall	0.5'	1,268	< 120	< 120	< 120	**169**
S-1-S-Wall-E	Single sidewall	0.5'	**2,210**	< 120	< 120	< 120	92.7
S-1-N-Wall-E	Single sidewall	0.5'	1,042	< 120	< 120	< 120	22.5
S-1-Base-W	Single excavation base	3.0	584	< 60	< 60	< 60	71.6
S-1-Base-E	Single excavation base	3.0'	**3,370**	< 120	< 120	< 120	**502**
1999 Remediation Phase - Excavation Area C							
S-2-N&S-Comp	2-point sidewall composite	0.5'	57.4	< 60	< 60	< 60	< 10
S-2-E&W-Comp	2-point sidewall composite	0.5'	26.7	< 6	< 6	7.73	6.04
S-2-Base-2'	Single excavation base	2'	< 7	< 6	< 6	< 6	1.8
1999 Remediation Phase - Excavation Area D							
B-01-Base-3'	Single excavation base	3'	51.6	< 60	< 60	< 60	< 10
B-01-N-0.5'	Single sidewall	0.5'	141.1	< 60	< 60	< 60	< 10
B-01-E-0.5'	Single sidewall	0.5'	38.0	< 6	< 6	< 6	1.57
B-01-S&W-Comp	2-point sidewall composite	0.5'	**6,300**	< 600	< 600	< 600	< 100
Regulatory Considerations							
PRG-Residential (and site-specific cleanup goal)			1,600	2,400	1,700	1,700	99
PRG-Industrial			12,000	19,000	13,000	13,000	670

Notes: Concentrations in bold are in excess of site cleanup goal; table includes only detected compounds.