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FINAL SITE INSPECTION REPORT ADDENDUM FOR PHASE 3 PROPERTIES

VERDESE CARTER PARK PROJECT
Oakland, California

AR0138

Prepared for

Honeywell
(formerly AlliedSignal, Inc.)

September 20, 2000

Prepared by

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September 20, 2000
Ref: 732483

SFD-73
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105-3901

Attn: Ms. Alana Lee

Subject: Verdese Carter Park Project (CERCLIS No. CAD98049613), Final Site Inspection Report Addendum for Phase 3 Properties

Dear Ms. Lee:

Attached please find the Final Site Inspection Report Addendum for Phase 3 Properties forthe Verdese Carter Park project. These documents are being submitted by Parsons Engineering Science, Inc. (Parsons) on behalf of Honeywell International (formerly AlliedSignal, Inc.) as part of a voluntary cleanup action. This cleanup has been conducted in response to the U.S. Environmental Protection Agency (USEPA) Action Memorandum entitled Request for a Removal Action at the Verdese Carter Park site, Oakland, Alameda County, CA (dated September 28, 1995).

The Final Site Inspection Report Addendum amends the Draft Final Site Inspection Report for Phase 3 Properties that was submitted to USEPA in 1998. The addendum documents the USEPA outreach program conducted at the site, describes revised conclusions based on more stringent screening criteria, and provides data describing supplemental sampling at 6 properties.

This report incorporates review comments made by USEPA to the draft report, and provided to Parsons in August 2000. It is our understanding that submittal of this report, in conjunction of the Removal Action Completion Report (provided under separate cover) constitutes the final response action requested by USEPA for the Verdese Carter Park project. Honeywell and Parsons are pleased to have participated with USEPA in a cooperative effort to complete this response action. We respectfully request that USEPA provide a letter addressed to Keith Bowers of Honeywell International indicating that the USEPA will be requesting no further response actions at the Verdese Carter Park project site.

Yours Sincerely,

PARSONS ENGINEERING SCIENCE, INC.

David S. Diamond, Ph.D., R.G.
Project Manager

DSD/dsd/sirpt addendum transmittal.doc
cc: Keith Bowers, Honeywell

FINAL SITE INSPECTION REPORT ADDENDUM FOR PHASE 3 PROPERTIES

VERDESE CARTER PARK PROJECT
Oakland, California

Prepared for

Honeywell
(formerly AlliedSignal, Inc.)

September 20, 2000

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U.S. Environmental Protection Agency (EPA) Region IX

FINAL SITE INSPECTION (SI) REPORT ADDENDUM FOR PHASE 3 PROPERTIES

VERDESE CARTER PARK PROJECT
Oakland, California

Site CERCLIS Number: CAD98049613

Prepared for

Honeywell (formerly AlliedSignal, Inc.)

Prepared by

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September 20, 2000

USEPA Remedial Project Manager
Alana Lee
(415) 744-2217

For USEPA use:

Received by Site Assessment Manager: Alana Lee Date: 9/28/00
Reviewed by: Alana Lee Date: 9/28/00
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ABBREVIATIONS

ACDEH	Alameda County Department of Environmental Health
ACLPPP	Alameda County Lead Poisoning Prevention Program
AlliedSignal	AlliedSignal, Inc.
bgs	Below Ground Surface
DHS	Department of Health Services
DTSC	Department of Toxic Substances Control
ICP	Inductively-Coupled Plasma
LCL	Lower Confidence Limit
mg/kg	milligrams per kilogram
Parsons	Parsons Engineering Science, Inc.
QC	Quality Control
QAPP	Quality Assurance Project Plan
RA	Removal Action
RPM	Remedial Project Manager
SI	Site Inspection
TCLP	Toxicity Characteristic Leaching Procedure
TSDF	Treatment, Storage and Disposal Facility
UCL	Upper Confidence Limit
USEPA	United States Environmental Protection Agency

EXECUTIVE SUMMARY

This addendum amends the *Draft Final Site Inspection Report (SI Report) for Phase 3 Properties, Verdese Carter Park Project, Oakland, California* (Parsons, 1998d). The Verdese Carter Park Project pertains to site characterization and remediation work conducted at residential properties near the site of a former battery manufacturing facility in Oakland, California. Sampling and remediation at these residential properties have been conducted in 3 phases: Phases 1 and 2 were previously conducted at properties with the highest soil lead levels; Phase 3 pertains to properties with relatively lower soil lead levels and properties that were not previously sampled. The addendum documents the following revisions and additions to the SI Report

- An outreach program was conducted by USEPA to ensure that Phase 3 property owners were given sufficient opportunity to have their properties evaluated, and that the local community was given the opportunity to comment on the findings of the SI Report.
- Site data were compared to a supplemental background data set that had generally lower lead levels than the background data set used in the SI Report.
- More stringent screening criteria were used for conducting site-to-background comparisons.
- Access was obtained for supplemental sampling at 6 properties. Four of these properties were sampled, results of which are included in this addendum. The remaining 2 properties were found to be primarily paved, so sampling was not conducted.

Sampling results from a west Berkeley neighborhood were obtained from the Alameda County Lead Poisoning Prevention Program (ACLPPP), and used as a supplemental background data set. Characteristics of this area that pertain to background lead levels were reviewed, and found to be generally similar to the Verdese Carter Park area. Lead levels in the west Berkeley data set were found to be lower than the sampling results from the Fruitvale District of Oakland that had been used for site-to-background comparisons in the SI Report.

At the request of USEPA, site-to-background comparisons were re-evaluated using the more protective west Berkeley background data set in lieu of the Oakland data set. Comparisons of the 50th and 75th percentiles of the background data set with property-specific soil-lead sampling results were used to screen properties as potential candidates for remediation. Each

potential candidate property was further evaluated based on local and regional distribution of lead concentrations in soil.

Based on the revisions and additions described above, 7 additional properties not included in the SI Report have been recommended for remediation (for a total of 13 Phase 3 properties).

Although the spatial distribution of elevated lead concentrations suggests that these 13 properties may have been impacted by emissions from the former battery factory, it is important to note that: 1) the properties have likely been impacted by other background lead sources, and; 2) the relatively higher lead concentrations at these 13 properties are all within the expected range of variation for the background data set. Therefore, it is not possible to establish conclusively whether or not any of these properties have been impacted by emissions from the former battery factory.

The sampling program has successfully defined the lateral extent of potential impacts to surface soil associated with the former battery factory. No further sampling outside the limits of potential impacts needs to be conducted.

The remediation recommendations described herein have been completed. Therefore, all known areas of elevated lead concentrations thought to pertain to impacts from the former battery factory have been remediated, with the possible exception of one Phase 1 property for which access was denied.

Property-specific reports describing the results of the SI Report and this addendum have been completed for the use of individual Phase 3 property owners. The text of these reports is presented as an attachment to this addendum.

SECTION 1
INTRODUCTION

1.1 GENERAL

This addendum amends the *Draft Final Site Inspection (SI) Report for Phase 3 Properties, Verdese Carter Park Project, Oakland, California* (Parsons, 1998d). The Verdese Carter Park Project pertains to site characterization and remediation work conducted at residential properties near the site of a former battery manufacturing facility in Oakland, California (Figures 1.1 and 1.2). Parsons Engineering Science, Inc. (Parsons) has conducted and/or supervised this work on behalf of Honeywell International, Inc. (Honeywell, formerly AlliedSignal, Inc.) in response to a U.S. Environmental Protection Agency (USEPA) Region IX request (USEPA, 1995a, 1995b) to evaluate the extent of lead in soil at the residential properties and conduct remediation as necessary.

Project work has been conducted in three phases. The first two phases involved site characterization and soil removal work at residential properties identified in preliminary USEPA sampling studies as having the highest lead levels. Preliminary screening samples collected at Phase 1 properties were determined to have average soil lead concentrations greater than 2,000 parts per million (ppm); samples collected from Phase 2 properties had average soil lead concentrations greater than 1,000 ppm. This work is documented in prior project documents (i.e., Parsons, 1996a). The third phase consisted of site characterization work conducted both at residential properties where lead concentrations were apparently lower than at the Phase 1 and 2 properties, and at properties where sampling had not previously been conducted. This third phase is referred to as the Site Inspection for Phase 3 Properties, and has the following primary objectives:

- Assess the regional extent and concentration of surface soil lead at residential properties near the former battery factory, by sampling 57 properties.
- Evaluate the degree to which surface soil lead may have resulted from lead dust emissions from the former battery factory, based on site-to-background comparisons, the observed lateral distribution of lead concentrations, and air dispersion modeling.
- Determine the extent of needed soil removal work based on assessment of battery factory emissions impacts.

A *Draft SI Report* describing the results of the third phase of site characterization was issued to USEPA on April 17, 1998 (Parsons, 1998c). This report described the results of sampling at 43 of the 57 proposed properties and concluded that soil removal work should be conducted at 6 of the sampled properties. Fourteen of the 57 properties were not sampled: At

10 of these properties, the property owners refused to grant access for sampling; at 4 of the remaining properties, property owners could not be contacted to request access, either because their home address did not correspond to assessor's records, and/or because they were not responsive to telephone calls or voicemail messages. After incorporation of USEPA comments, a *Draft Final SI Report* (dated September 1, 1998) was completed (Parsons, 1998d). This report also included, as an appendix, a Data Quality Assessment Report pertaining to sampling data collected during the SI (Parsons, 1998b). Subsequent to completion of the Draft Final SI Report, USEPA has indicated that the following actions should be completed prior to approval of the report:

1. A legal brief (dated September 16, 1998) which included technical comments pertaining to the SI Report was provided to USEPA by the Law Offices of Nadrich and Associates (Nadrich and Associates, 1998). USEPA requested that all technical comments listed in the brief be addressed. In response to this request, Parsons provided USEPA with a memorandum dated April 23, 1999 (Parsons, 1999d) comprising a point-by-point discussion of all technical issues raised in the brief.

2. To ensure that as many as possible of the 57 properties within the original Phase 3 SI sampling program were evaluated, USEPA conducted an additional outreach program at properties where sampling access had previously been denied by the owners. The objective of this program was to convince property owners that sampling of their properties should be conducted. All owners at these properties were given the opportunity to have sampling and evaluation of their properties if permission for access was received prior to the end of the public comment period (July 31, 1999). As a result of this outreach program, access was obtained at 6 additional properties, so that a total of 49 of the 57 properties within the original SI program were evaluated. At one of these properties, sampling was not conducted because all intended sampling areas were paved. In addition, USEPA also contacted five Phse 1 and 2 property owners where access had previously not been granted. Access was not obtained at any of these five properties. The scope of the outreach program is discussed in Section 5. Both the additional sampling results and the status of the remaining inaccessible properties are discussed in Section 2 of this addendum. A data quality assessment report pertaining to the newly collected samples is provided in Attachment C of this addendum.

3. To ensure that the background area described in the SI Report was representative of site background conditions, USEPA requested that site data be compared to a second background data set. That comparison is described in Section 3 of this addendum.

4. To increase the protectiveness of remediation recommendations, USEPA requested that more stringent criteria be used for selection of properties for remediation. The more stringent criteria are described in Section 4 of this addendum.

5. To provide residents of the Verdese Carter Park Project area with sufficient opportunity to comment on the conclusions of the SI Report, USEPA conducted a public outreach program, and hosted a public meeting presentation on June 14, 1999 at E. Morris Cox School, adjacent to the park site. The outreach program and public

meeting presentation served to: a) communicate to neighborhood residents the results and recommendations provided in the SI Report, as amended by items 1 and 2 above; b) gain access for sampling and/or remediation at properties where access had not previously been granted, and; c) inform residents that the public comment period on SI Report findings and recommendations would end on July 31, 1999. The outreach program is described in Section 5 of this addendum.

Based on the sampling results of former "no access" properties and on changes to remediation recommendation criteria described above, 7 additional properties (for a total of 13 properties) have been recommended for remediation. Remediation has been completed at all 13 properties, as documented in Removal Action Completion Reports for these properties (Parsons, 2000a through 2000m).

This addendum describes additions and modifications which complement the findings and recommendations of the Draft Final SI Report, based on the actions described above. These additions and modifications include revisions to all of the property-specific technical memoranda that were included as Attachments A and B of the SI Report. The revised technical memoranda are included as Attachments A and B of the current addendum, and supercede those provided in the SI Report. A supplemental Data Quality Assessment Report pertaining to samples collected at properties sampled subsequent to issuance of the Draft Final SI Report is included as Attachment C of the current addendum.

1.2 PRIOR DOCUMENTS

The following project documents have been previously issued in support of the Verdese Carter Park Project:

- A Removal Site Inspection (RSI) Workplan (Parsons 1996a), which describes soil sampling activities at properties slated for a two phase (Phase 1 and Phase 2) time-critical soil removal action within the Verdese Carter Park Project Area.
- A Site Safety and Health Plan (SSHP) (Parsons 1996b), which governs safety- and health-related requirements and procedures for conducting project fieldwork. The requirements of the SSHP apply to the sampling activities proposed in this Final SI Report Addendum.
- A Quality Assurance Project Plan (QAPP) (Parsons 1996c), which describes data quality assessment criteria and laboratory quality control procedures. The requirements of the QAPP apply to the sampling activities proposed in this Final SI Report Addendum except where modifications to QAPP protocols are noted.
- Property-specific RSI Technical Memoranda for the Phase 1 and Phase 2 soil removal action properties (Parsons 1996d). The Technical Memoranda describe RSI sampling results and give recommendations for soil removal areas at each property.
- A Removal Action (RA) Workplan (Parsons 1996e), which describes the procedures to be used for conducting the Phase 1 and Phase 2 soil removals.

- A Removal Action (RA) Workplan (Parsons 1999a), which describes the procedures to be used for conducting the Phase 3 soil removals.
- RA Completion Reports for the Phase 1 and Phase 2 soil removal action properties (Parsons 1998a), which describe the extent of soil removal actions and results of confirmation soil sampling conducted at each property.
- Data Quality Assessment Reports Nos. 1, 2 and 3 (Parsons 1996f, 1997b and 1997c), which describe data quality parameters associated with data reported in the RSI Technical Memoranda and RA Completion Reports.
- A Site Inspection Workplan (Parsons, 1997a) which describes proposed soil sampling activities at the Phase 3 properties described in current addendum.
- The Draft Site Inspection Report which presented initial findings of soil sampling activities at the Phase 3 Properties.
- The Draft Final Site Inspection Report, (Parsons, 1998d) which incorporated initial USEPA comments on the Draft Site Inspection Report.

1.3 PROJECT ORGANIZATION

The SI has been conducted under the oversight of the USEPA. The USEPA remedial project manager is Ms. Alana Lee.

The Honeywell project manager is Mr. Keith Bowers.

Honeywell retained Parsons to coordinate site sampling and analysis activities and to act as Honeywell on-site representative. The Parsons project manager is Dr. David Diamond. The Parsons health and safety officer is Dr. Dennis Brown. The Parsons Technical Director for the project is Mr. Sam Collins.

Honeywell retained Katalyst Laboratory as the analytical laboratory for the initial part of the SI. The Katalyst project manager is Mr. Chris Ohland.

Honeywell retained Forensic Laboratory of Hayward, California as the analytical laboratory for all soil lead analyses conducted after May 1999. The Forensic Analytical project manager is Ms. Christine Wall. The Forensic Analytical laboratory director is Mr. Dave Sandusky.

SECTION 2
SUPPLEMENTARY SAMPLING

The supplementary sampling results described below represent an addition to the data reported in Appendices A and B of the Draft Final SI Report. The new sampling data were collected using methods described in Section 2.1 of the Draft Final SI Report.

2.1 SAMPLING SCOPE

As a result of the USEPA outreach program, access for sampling was obtained at parcels 30, 35, 40, 42, 46, and 61. Delineation soil sampling was then conducted at each of these properties in accordance with procedures outlined in the SI Workplan (Parsons, 1997a), with the following exceptions:

- Sampling at parcel 35 was not conducted because, after obtaining access, it was found that almost all yard areas were paved and inaccessible to residents. There was no location at the property where a representative sample of non-dripline soil could be collected (Parsons, 1999b).

- Sampling at Parcel 40 was not conducted because almost the entire property is paved, and two USEPA samples had previously been collected in the very small exposed soil area at the property. It was concluded that the two previously collected samples were sufficient to characterize the soil in this small area.

- Subsequent to completion of delineation sampling at Parcel 61, the property owner informed USEPA that prior to Parsons' delineation sampling, he had conducted landscaping work in which he had excavated all topsoil in the front yard and placed it in the back yard. He was therefore concerned that these actions may have artificially lowered surface soil lead concentrations in the front yard, resulting in lowering of the property-wide sample mean lead concentration and thereby triggering an inappropriate "no action" decision for the remainder of the property. In response to the owner's concerns, supplementary delineation sampling was conducted at this property. Two sample types were collected: a set of gridded systematic random samples in an area thought to be previously undisturbed and therefore representative of non-excavated areas, and several directed samples. A short supplemental sampling plan for this property was prepared and reviewed by USEPA prior to sampling (Parsons, 1999c). A copy of this plan is provided in Appendix E.

Figure 2.1 is an updated map summarizing lead concentration data for all delineation yard samples collected in the Verdese Carter Park area. This map supercedes Figure 3.2 of the Draft Final SI Report. Maps and tables of the sampling results from both the supplemental

sampling areas and from all previously sampled Phase 3 properties are provided in Appendix A. Laboratory analytical reports and chain-of-custody forms for the supplemental sampling results are provided in Appendix B. A Data Quality Assessment Report pertaining to the supplemental sampling is provided in Attachment C.

SECTION 3
SUPPLEMENTARY BACKGROUND DATA

The supplementary background data described below were obtained in order to revise the background area selection described in Section 4.1 of the Draft Final SI Report. The Draft Final SI Report presented recommendations for further remediation based on site-to-background comparisons for each of the sampled residential properties. These comparisons used background data collected from the Fruitvale District of Oakland by the California Department of Health Services (DHS). The DHS data set was determined by USEPA, Department of Toxic Substances Control (DTSC) and Alameda County Department of Environmental Health (ACDEH) staff (Parsons, 1996g) to be representative of background conditions based on proximity to the Verdese Carter Park site and because primary characteristics that affect background lead concentrations (i.e., age of housing, traffic volume, etc.) are similar to those in the Verdese Carter Park Project Area.

As requested by USEPA, a second set of site-to-background comparisons has been conducted using a background data set collected by Alameda County Lead Poisoning Prevention Program (ACLPPP) in west Berkeley. Although the west Berkeley background area is more distant from the Verdese Carter Park site than the original Fruitvale background area, it is also similar to the Verdese Carter Park Project Area in characteristics that affect background lead concentrations. A detailed discussion of the west Berkeley data set is presented below. The results of the site-to-background comparison conducted using this data set are reported in Section 4.

3.1 WEST BERKELEY BACKGROUND AREA

The west Berkeley data set contains sampling data collected from 63 residential yards (in an area bounded by Channing, Addison, Seventh and Tenth Streets in west Berkeley), approximately 11 miles north of the Verdese Carter Park area (Figure 3.1). To protect homeowner confidentiality, exact addresses were not provided by ACLPPP. Surface soil samples collected at each property were designated as "structure" (collected from within 5 feet of a building) or as "centeryard" (collected from close to the center of the front or back yard). The "centeryard" samples were inferred to be comparable to Parsons' "delineation yard" samples, and so were used for site-to-background comparisons. The "structure" samples were inferred to be comparable to Parsons' "delineation dripline" samples, which may be unduly affected by lead-based paint impacts, and so were not used in conducting site-to-background comparisons.

The west Berkeley data were collected as part of ACLPPP's "B-Lead-Safe" program, the purpose of which is to raise public awareness regarding potential lead contamination in the

home. In contrast to most data collected by ACLPPP, which are obtained from homes where a child with an elevated blood-lead level has been identified, these data were collected from all accessible homes in the area without regard to the presence of a child with elevated blood-lead levels. Therefore the data set is considered to be unbiased with regard to impacts on human health. The ACLPPP data are provided in Appendix C.

Characteristics of the west Berkeley area were reviewed to determine whether principal factors that potentially influence the presence of lead in soil were comparable to the Verdese Carter Park area. Two characteristics, proximity to transportation corridors and age of housing, have been identified as good predictors of lead in soil and dust at residential properties in urban areas (Teichmann, et al. 1993; Sutton, et al. 1995).

The study by Sutton and others, (1995) of housing areas in Oakland, Los Angeles and Sacramento, California showed that a steep decline in lead paint concentrations occurred in the 1950s, coinciding with the start of paint-industry-wide lead reductions. The paint on homes built before the 1950s is therefore likely to contain more lead than homes built in the 1950s and later. For this reason, the percentage of pre-1950s homes in an area is a key indicator of the potential amount of lead in paint that has weathered into the soil. Therefore, neighborhoods with pre-1950s housing are more likely to have elevated lead concentrations in soil than newer neighborhoods.

Housing construction year data were obtained from the electronic files provided with the Fruitvale and west Berkeley data sets, and from TRW copies of assessor's reports for the Verdese Carter Park data. These data, along with an estimate of the time that painted surfaces were exposed to weathering (and therefore contributing to soil lead levels) are shown in the Table 3.1 and appear to be similar for the three areas.

The Verdese Carter Park area and both background areas are located in residential "flatland" neighborhoods laid out in rectangular-block street grids. They comprise a mix of single family homes and apartment buildings. Several significant surface-street traffic corridors lie within or adjacent to both Verdese Carter Park (98th Avenue, Bancroft Avenue) and the Fruitvale areas (East 14th Street, Foothill Boulevard, Fruitvale Street). In contrast, no major streets transect or border the west Berkeley study area, although U.S. Interstate 80 lies approximately 0.5 miles west of the area. In general, this information indicates that traffic access is similar in the three areas, although the west Berkeley area may have lower traffic impacts than the other two areas due to the lack of adjacent major traffic corridors.

To ensure that the west Berkeley area had not been unduly impacted by local point sources of lead (such as a battery factory), Parsons investigated historical industrial activities within 0.5 miles of the area by reviewing historical Berkeley business directories, yearbooks of industry, available Sanborn fire insurance maps, and other documents. This review was supplemented by a "windshield survey" of the area. A tabulation of identified facilities, a sketch map of facility locations, and a qualitative assessment of each facility's potential for air emissions of lead is given in Appendix D. For example, machining and casting operations that worked primarily with non-lead metals were assumed to have a "low" potential, facilities that produced paints and conducted lead casting operations were assumed to have a "moderate" potential, and battery production facilities were assumed to have a "high"

potential. These assessments are considered to be generally conservative, because a number of facilities (such as those listed as paint companies) are suspected to have been warehouses or distribution facilities, not manufacturers, and would not have emitted very much, if any, lead.

Similar to the Fruitvale area, there are a number of foundries, machine shops, and other metal working facilities within a mile of the west Berkeley area--some located upwind (west) of the area. However, no large industrial operations (such as a battery factory) that would be likely to have significant air emissions of lead particulates were noted. In addition, the large, heavy lead particles produced by grinding and machining operations conducted at most of the facilities would tend to settle near to their source (i.e., within, or immediately adjacent to the facility) as compared to the relatively fine particulates produced by the lead oxide mill at a battery factory, which are likely to be dispersed over a wider area beyond the factory. Therefore, it is unlikely that there were any significant local point sources of lead that impacted residences in the west Berkeley area.

The information given above indicates that characteristics that impact anthropogenic lead levels are generally comparable for both the west Berkeley area and the Verdese Carter Park area. However, due to the lack of major traffic corridors in the west Berkeley area, lead levels derived from historic automobile pollution may be lower than those found in the Verdese Carter Park area.

3.2 BACKGROUND STATISTICS

Table 3.2 shows summary statistics for both the Fruitvale area and west Berkeley area background data sets.

SECTION 4
SITE-TO-BACKGROUND COMPARISONS

This section modifies Sections 4.1.3, 4.1.4, and 4.2 of the Draft Final SI Report, which compared soil lead concentrations from a background area with those from individual Phase 3 properties. The site-to-background comparisons use both statistical and qualitative methods. A glossary of statistical terms used is provided in Appendix F.

4.1 INITIAL SITE-TO-BACKGROUND COMPARISONS

For the Draft Final SI Report, remediation decisions were made as follows:

- Delineation yard sample results from each sampled residence were assembled into individual data sets representing each property.

- Tests for normality were conducted on the background data and site data. The data were found to be log-normally distributed (i.e., the logarithms of the concentration data were found to have a normal distribution, whereas the data itself had a skewed, non-normal distribution) as is typical of environmental sampling data.

- Each property-specific data set was compared to the Fruitvale area background data set using two screening methods:

  1. Log-transformed site data were compared to the log-transformed background data using a t-test. Only one property (parcel 39) failed the t-test comparison, indicating that it had a mean lead concentration that exceeded the background area mean at a 5 percent level of significance.

  2. The property-specific data were compared to the 50th (median) and 75th percentiles of the Fruitvale area background data set, since these percentile criteria represent the distribution of the upper range of the data. For seven properties (parcels 34, 39, 41, 45, 47, 48 and 63), including the property that failed the t-test comparison, it was found that: 1) more than 50 percent of the sample results exceeded the 50th percentile of the Fruitvale area background data set, and/or; 2) more than 25 percent exceeded the 75th percentile of the background data set.

- For each property where lead concentrations exceeded the percentile criteria described above, the spatial distribution of lead at each of these properties was reviewed in light of regional patterns of lead distribution, modeled factory emissions, and local patterns of lead distribution at and adjacent to each property. Based on these reviews, it was

concluded that elevated lead concentrations could possibly be attributable to battery factory emissions at six of the seven properties (parcels 39, 41, 45, 47, 48 and 63). These properties were recommended for remediation.

4.2 REVISED SITE-TO-BACKGROUND COMPARISONS

Revised site-to-background comparisons were conducted for all Phase 3 properties. During this comparison, site sampling notes and field photographs were reviewed, and showed that several dripline samples (samples D-76-02, D-76-11, D-80-03, D-80-07 and D-80-08) at two Phase 3 properties (parcels 76 and 80) had been inadvertently miscategorized in the Draft Final SI Report as yard samples. The corrected data tables and figures for both properties (parcels 76 and 80) are shown in Appendix A.

Two modifications have been made to the site-to-background comparison methodology:

- The summary statistics described in Section 3 indicate that the west Berkeley background data set has lower lead concentrations than the Fruitvale area background data set. Therefore, as requested by USEPA, to increase the protectiveness of remediation decisions, all site-to-background comparisons were revised using the west Berkeley background data set *in lieu* of the Fruitvale area background data set.

- As shown in the Draft Final SI Report, more properties were identified as potential candidates for remediation when screened by comparing them to the 50th and 75th percentiles, than by using t-tests. Because the comparison of site data to the 50th and 75th percentiles is a more conservative approach than the t-test (and thus complies with USEPA's request to use more stringent selection criteria), the percentile comparisons were used as the screening method for comparing property-specific data to the west Berkeley background area. Figure 4.1 graphically shows all property-specific data compared to these two percentile criteria for both the Fruitvale and west Berkeley background data sets. Table 4.1 contains the results of the percentile comparisons for each of the sampled properties, including the following:

  — Samples with concentrations greater than the background area percentile criteria are identified.

  — The percentage of samples at each property that had concentrations greater than each background percentile criteria is calculated.

  — The numbers of samples that represent 50 percent and 25 percent of the samples at each property are compared, respectively, to the numbers of samples that exceed the 50th and 75th percentiles of the west Berkeley data set. The number of samples exceeding each percentile criteria are then plotted. For example, for a property with 10 samples, 5 represents 50 percent of the samples. If 7 out of 10 samples at the property exceed the 50th percentile of the west Berkeley data set (546 mg/kg), that would be 2 samples more than the 5 out of 10 criterion.

It is important to note that the percentile screening method (unlike the t-test) does not account for variability within the sample and background data sets. Because variability is inherent in

environmental data, t-tests account for the possibility that the mean of the sample data may be slightly higher or lower than the background data. The percentile comparison does not. The percentile comparison is therefore more conservative than the t-test in that if even one sample more than 50 percent (or 75 percent) of the data set exceeds the screening criteria then the property is considered for remediation. Thus, the percentile screening method has a high probability of erroneously selecting some properties as candidates for remediation when they have actual lead concentrations lower than background. A comparison of the results of the decision to remediate based on the t-test versus the percentile test, as presented in the Draft Final SI Report, is useful in demonstrating the conservative nature of the percentile comparison.

Figure 4.2 shows the 95 percent upper and lower confidence limits on the geometric mean for the west Berkeley and Fruitvale background data sets, and for each Phase 3 property, calculated as described in Section 4 of the Draft Final SI Report. On this figure, the vertical bars enclose the range of concentrations within which there is a 95 percent probability that the true geometric mean lies. This figure shows that, except for parcel 39, the confidence intervals for all properties overlap (or are less than) those for the background areas. Property 39 is also the only property that failed the t-test criterion described in the Draft Final SI Report. In contrast, the percentile comparison shown in Table 4.1 identifies 18 properties (parcels 33, 34, 39, 40, 41, 45, 46, 47, 48, 60, 62, 63, 65, 72, 74, 76, 79 and 75) for which 50% or 25% of the samples exceeded, respectively, the 50th or 75th percentiles of the west Berkeley background data set. Among these 18 properties, those with confidence intervals that overlap the most with the confidence intervals of the background data sets are those most likely to be erroneously selected as candidates for remediation. All other properties were eliminated from consideration as candidates for remediation because they were interpreted to have lead concentrations less than the background area.

For 7 of the 18 screened properties (parcels 33, 40, 62, 65, 72, 76, and 79) the 50th or 75th percentile criteria were exceeded by no more than one sample. This is interpreted to indicate that these properties have lead concentrations similar to those in the west Berkeley background area. For example, seven samples were collected at parcel 62, thus 3.5 represents 50 percent of the samples and 1.75 represents the number of samples above 75 percent. Four of the seven samples exceeded the 50th percentile and two exceeded the 75th percentile of the west Berkeley background data. Therefore, the 50th percentile criterion is exceeded by only 0.5 samples (4 minus 3.5), and the 75th percentile criterion is exceeded by only 0.25 samples (2 minus 1.75). For these properties, the 95 percent confidence intervals for parcel 62 show a high degree of overlap with the west Berkeley background area.

Due to the apparent close comparison between lead levels at these 7 properties with those from the background area, the sampling maps (Appendix A) for each of these seven properties were examined in detail to evaluate whether any unusual lead distribution patterns were present that might indicate that the sampling data were not representative of lead concentrations. No unusual patterns were noted for parcels 33, 62, 65, 72, 76 and 79, so these properties were eliminated from consideration as candidates for remediation because they were interpreted to have lead concentrations similar to the background area. However, due to the very small exposed soil area at parcel 40, the systematic random sampling plan

described in the SI Workplan could not be implemented, and only two grab samples were collected. This is an insufficient number of samples to be representative of lead concentrations at the property. Since this property lies between two Phase 1 properties (parcels 2 and 5) and one Phase 3 property (parcel 39) with lead concentrations substantially greater than background concentrations, it is considered likely that parcel 40 also has lead concentrations similar to those properties, and substantially greater than background levels. Therefore, parcel 40 was recommended for remediation.

For 11 of the 18 screened properties (parcels 34, 39, 41, 45, 46, 47, 48, 60, 63, 74, and 75), more than one sample exceeded the 50th or 75th percentile criteria. For example, nine samples were collected at parcel 75, thus 4.5 represents 50 percent of the samples collected at the property. Six of the nine samples exceeded the 50th percentile of the west Berkeley background data. Therefore, the 50th percentile criterion is exceeded by 1.5 samples (6 minus 4.5). Sample data for the eleven properties also have the least amount of overlap between the property-specific and background confidence limit ranges (Figure 4.2). This information suggests that these properties have a moderate potential to have lead concentrations greater than background levels. In addition, all of these properties, with the exception of parcel 34, lie within areas ("hot spots") identified in Section 3 of the Draft Final SI Report as having elevated lead concentrations possibly impacted by the former battery factory and were therefore recommended for remediation. As discussed in Section 4 of the Draft Final SI Report, consideration of lead distribution and air modeling data indicates that parcel 34 is unlikely to have been impacted by the former battery factory. However, as a conservative measure, parcel 34 is also recommended for remediation because several samples had substantially higher lead concentrations than most other properties (Figure 4.1).

As described in Section 2, supplemental sampling was conducted at parcel 61 because of the homeowner's concerns that lead-impacted soil had been redistributed by landscaping activities that had occurred prior to the Phase 3 sampling. As shown in Table 4.1, percentile comparisons for both the original systematic random sampling conducted for the entire property, as well as the supplemental systematic random sampling conducted for the back yard alone, indicate that lead concentrations at this property are below background levels. However, several directed samples collected from a soil stockpile in the back yard had elevated lead concentrations. At the request of USEPA, a portion of the back yard of this property, including the soil stockpile area, was recommended for remediation.

Figures showing the proposed soil removal areas for each property are shown in Appendix A. Specific remediation recommendations for each of the properties described above are given in Attachment B.

SECTION 5
OUTREACH PROGRAM

The USEPA public outreach program involved communication with all owners of Phase 3 properties to inform them of the general findings discussed in Sections 3 and 4 of this addendum. This information was communicated through the following means:

- USEPA provided each Phase 3 property owner with a letter that indicated whether or not remediation was recommended for their property and requesting that comments directed to USEPA be provided on these recommendations. For properties where requests for access to conduct either sampling or remediation had previously been declined or not responded to, access was again requested. Each letter also invited property owners and residents to attend a public meeting presentation on June 14, 1999 describing the findings of the SI Report, as modified by revisions described in Sections 3 and 4 of this addendum. Each letter noted that comments or access permission would no longer be considered after the public comment period ending on July 31, 1999.

- For properties where access for sampling or remediation had not been previously obtained, USEPA conducted both a door-to-door and a telephone outreach program to ensure that property owners were given sufficient opportunity to provide access. This program was conducted in June and July 1999. Property owners were told that access permission would no longer be considered after the public comment period ending on July 31, 1999.

- USEPA also contacted five property owners of Phase 1 and 2 properties where access for sampling or soil removal had previously not been granted.

- USEPA hosted a public meeting presentation on June 14, 1999 at E. Morris Cox School, adjacent to the park site. The presentation described the findings of the SI Report as modified by revisions described in this addendum, and included a public question and comment period.

The public outreach program had the following results:

- Access was obtained for six Phase 3 properties (Parcels 30, 35, 40, 42, 46 and 61), as described in Section 2. These properties were sampled and/or remediated according to the evaluation criteria described in Section 4. Access was not obtained at the five Phase 1 and 2 properties.

- After consideration of all public comments, USEPA approved adoption of the SI Report recommendations, as amended by the revisions described in this addendum.

SECTION 6
CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

The Draft Final SI Report concluded that 6 Phase 3 properties potentially exceeded background soil lead levels. The more stringent site-to-background comparisons applied in Section 4 of this addendum indicate that 7 additional properties have lead levels potentially higher than background levels.

The Draft Final SI Report concluded that the Phase 3 sampling program had successfully defined the lateral extent of potential impacts to surface soil associated with the former battery factory. Due to the application of more stringent background criteria, this conclusion is re-evaluated below.

> The lateral extent of all soil lead delineation sampling data collected for the Verdese Carter Park project is shown on Figure 2.1. In comparison, Figure 1.2 shows the proposed Phase 1, 2 and 3 excavation areas, which consist of all areas within the Verdese Carter Park project in which soil lead concentrations were found to be higher than background. These areas include the additional 7 properties described above, and were selected by applying the more stringent site-to-background comparisons to the delineation sampling data. All sampled areas that appear on Figure 2.1 but are not shown as proposed excavation areas on Figure 1.2 have soil lead concentrations lower than, or comparable to, background. Comparison of Figures 1.2 and 2.1 shows that areas that were sampled but not proposed for excavation (i.e. areas with lead concentrations lower than or comparable to background) lie outboard of (i.e. further from the former battery factory than) all of the proposed excavation areas (areas with lead concentrations greater than background), except for parcel 46. This indicates that, in light of the more stringent background criteria, the Phase 3 sampling program has successfully defined the lateral extent of potential impacts to surface soil with the possible exception of parcel 46.
>
> Inspection of the parcel 46 sampling map (Appendix A) and sample results for adjacent properties along Elmar Avenue (Figures 1.1 and 2.1) shows that, with the exception of a single curbstrip sample, lead concentrations in front yards adjacent to Elmar Avenue are consistently low relative to the median (546 mg/kg) of the west Berkeley background area. These sampling results define a broad area of low lead concentrations that lies outboard of the only portion of parcel 46 that has elevated concentrations. This interpretation is corroborated by the fact that the samples at parcel 46 that contained elevated concentrations of lead are also located in an area

that has a high potential to have been impacted by automobile emissions and lead-based paint (Parsons, 2000o). Therefore, the elevated concentrations found at parcel 46 may not be representative of impacts from the former battery factory.

The observations cited above indicate that the lateral extent of potential impacts to surface soil associated with the former battery factory has been successfully defined.

6.2 RECOMMENDATIONS

Soil removals have been recommended and conducted at the 13 properties (parcels 34, 39, 40, 41, 45, 46, 47, 48, 60, 61, 63, 74, and 75) listed in Section 4.2 where soil lead levels may exceed background levels (Parsons, 2000a through 2000m). Upon implementation of the proposed soil removal work, all known areas of elevated lead concentrations interpreted to be associated with the former battery factory will have been remediated, with the exception of properties for which sampling and/or remediation access could not be obtained.

The status of all Phase 1, Phase 2 and Phase 3 properties is presented in Table 5.1, as based on the conclusions described in Section 5 of the Draft Final SI Report, and amended by the findings of this addendum.

It is recommended that property-specific results of the investigation reported herein should be reported individually to owners of Phase 3 properties. These results are provided in the form of individual Technical Memoranda that each contain a simplified version of the contents of both this report and the Data Quality Assessment Report (Attachment C). The Technical Memoranda for 11 of the 13 Phase 3 properties that were recommended for remediation were previously issued to homeowners (Parsons, 1999e through 1999p). Two of the 13 technical memoranda for properties recommended for remediation (Parsons, 2000n and 2000o) are presented in this report, as are the remaining technical memoranda for Phase 3 properties that were not recommended for remediation. The information presented in each of the technical memoranda is presented as follows:

- Attachment A contains the boilerplate text that is used in each of the Technical Memoranda, showing insertion points for property-specific non-boilerplate information.
- Attachment B contains the property-specific data tables that list non-boilerplate text inserted into each Technical Memorandum.
- Appendix A contains the combined figures and data tables for all of the Technical Memoranda.
- Appendix B contains the combined analytical reports and chain-of-custody forms for all of the Technical Memoranda.

Each of these attachments and appendices <u>supercede</u> the equivalent attachments and appendices provided in the Draft Final SI Report.

SECTION 7
REFERENCES

Nadrich and Associates, 1998, Revised Plaintiff's Second Supplemental Mediation Brief, Superior Court of California for County of Alameda, September 16

Parsons 1996a, Removal Site Investigation Workplan, Verdese Carter Park Project, Oakland, California, April 30

Parsons 1996b, Site Safety and Health Plan (SSHP Verdese Carter Park Project, Oakland, California, 8 April

Parsons 1996c, Final Quality Assurance Project Plan (QAPP) Verdese Carter Park Project, Oakland, California, May 1

Parsons 1996d, RSI Technical Memoranda for Phase 1 and Phase 2 soil removal action properties, Verdese Carter Park Project, Oakland, California, 26 individual reports, various dates

Parsons 1996e, Final Removal Action (RA) Workplan for Phase 1 and 2 RA Properties, Verdese Carter Park Project, Oakland, California, July 18

Parsons, 1996f, Data Quality Assessment Report No. 1 for Phase 1 and 2 RA Properties, Verdese Carter Park Project, Oakland, California, June 28

Parsons, 1996g, Meeting minutes for Verdese Carter Park project – RSI workplan comment review meeting, April 2

Parsons, 1997a, Final Site Inspection Workplan for Verdese Carter Park Project, Oakland, California, 3 March

Parsons, 1997b, Data Quality Assessment Report No. 2 Removal Site Inspection at Property Numbers 1, 2, 3, 4, 5, 11, 12, 18, 23, 25, 26 for Verdese Carter Park Project, Oakland, California, May 29

Parsons, 1997c, Data Quality Assessment Report No. 3, Removal Action at Properties Numbers 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 15, 16, 17, 19, 21, 22, 23, 24, 25, 26, 28 for Verdese Carter Park Project, Oakland, California, November 3

Parsons 1998a, RA Completion Reports for Phase 1 and Phase 2 properties, Verdese Carter Park project, Oakland, California, 23 individual reports, February

Parsons, 1998b, Data Quality Assessment Report No. 4, Site Investigation, Verdese Carter Park Project, Oakland, California, April 2

Parsons 1998c, Draft Site Inspection Report for Verdese Carter Park Project, Oakland, California, April 17

Parsons 1998d, Draft Final Site Inspection Report for Phase 3 Properties, Verdese Carter Park Project, Oakland, California, September 1

Parsons 1999a, Final Removal Action (RA) Workplan for Phase 3 RA Properties, Verdese Carter Park Project, Oakland, California, 21 August

Parsons, 1999b, Memorandum from David Diamond (Parsons) to Alana Lee (USEPA) documenting sampling conditions at Parcel 35, October 1

Parsons, 1999c, Memorandum from David Diamond (Parsons) to Alana Lee (USEPA) entitled: Parcel 61 Resampling Locations, September 17

Parsons, 1999d, Letter from David Diamond to Alana Lee (USEPA) entitled: Response to "Revised Plaintiff's Second Supplemental Mediation Brief, Superior Court of California for County of Alameda, Verdese Carter Park Project, CERCLIS Number CAD98049613, April 23

Parsons, 1999e, Site Inspection Technical Memorandum for , Parcel Number 34, Verdese Carter Park Project, Oakland, California, June 4

Parsons, 1999f, Site Inspection Technical Memorandum for , Parcel Number 39, Verdese Carter Park Project, Oakland, California, February 8

Parsons, 1999g, Site Inspection Technical Memorandum for , Parcel Number 40, Verdese Carter Park Project, Oakland, California, September 27

Parsons, 1999h, Site Inspection Technical Memorandum for , Parcel Number 41, Verdese Carter Park Project, Oakland, California, February 8

Parsons, 1999i, Site Inspection Technical Memorandum for , Parcel Number 45, Verdese Carter Park Project, Oakland, California, February 8

Parsons, 1999j, Site Inspection Technical Memorandum for , Parcel Number 47, Verdese Carter Park Project, Oakland, California, September 20

Parsons, 1999k, Site Inspection Technical Memorandum for , Parcel Number 48, Verdese Carter Park Project, Oakland, California, February 8

Parsons, 1999l, Site Inspection Technical Memorandum for , Parcel Number 60, Verdese Carter Park Project, Oakland, California, June 4

Parsons, 1999m, Site Inspection Technical Memorandum for , Parcel Number 61, Verdese Carter Park Project, Oakland, California, February 8

Parsons, 1999n, Site Inspection Technical Memorandum for , Parcel Number 63, Verdese Carter Park Project, Oakland, California, February 8

Parsons, 1999o, Site Inspection Technical Memorandum for , Parcel Number 74, Verdese Carter Park Project, Oakland, California, June 1

Parsons, 1999p, Site Inspection Technical Memorandum for , Parcel Number 75, Verdese Carter Park Project, Oakland, California, June 1

Parsons, 2000a, Removal Action Completion Report for , Parcel Number 34, Verdese Carter Park Project, Oakland, California, September 19.

Parsons, 2000b, Removal Action Completion Report for , Parcel Number 39, Verdese Carter Park Project, Oakland, California, September 19.

Parsons, 2000c, Removal Action Completion Report for , Parcel Number 40, Verdese Carter Park Project, Oakland, California, September 19.

Parsons, 2000d, Removal Action Completion Report for , Parcel Number 41, Verdese Carter Park Project, Oakland, California, September 19.

Parsons, 2000e, Removal Action Completion Report for , Parcel Number 45, Verdese Carter Park Project, Oakland, California, September 19.

Parsons, 2000f, Removal Action Completion Report for , Parcel Number 46, Verdese Carter Park Project, Oakland, California, September 19.

Parsons, 2000g, Removal Action Completion Report for , Parcel Number 47, Verdese Carter Park Project, Oakland, California, September 19.

Parsons, 2000h, Removal Action Completion Report for , Parcel Number 48, Verdese Carter Park Project, Oakland, California, September 19.

Parsons, 2000i, Removal Action Completion Report for , Parcel Number 60, Verdese Carter Park Project, Oakland, California, September 19.

Parsons, 2000j, Removal Action Completion Report for , Parcel Number 61, Verdese Carter Park Project, Oakland, California, September 19.

Parsons, 2000k, Removal Action Completion Report for , Parcel Number 63, Verdese Carter Park Project, Oakland, California, September 19.

Parsons, 2000l, Removal Action Completion Report for , Parcel Number 74, Verdese Carter Park Project, Oakland, California, September 19.

Parsons, 2000m, Removal Action Completion Report for , Parcel Number 75, Verdese Carter Park Project, Oakland, California, September 19.

Parsons, 2000n, Amended Site Inspection Technical Memorandum for , Parcel Number 61, Verdese Carter Park Project, Oakland, California, February 8

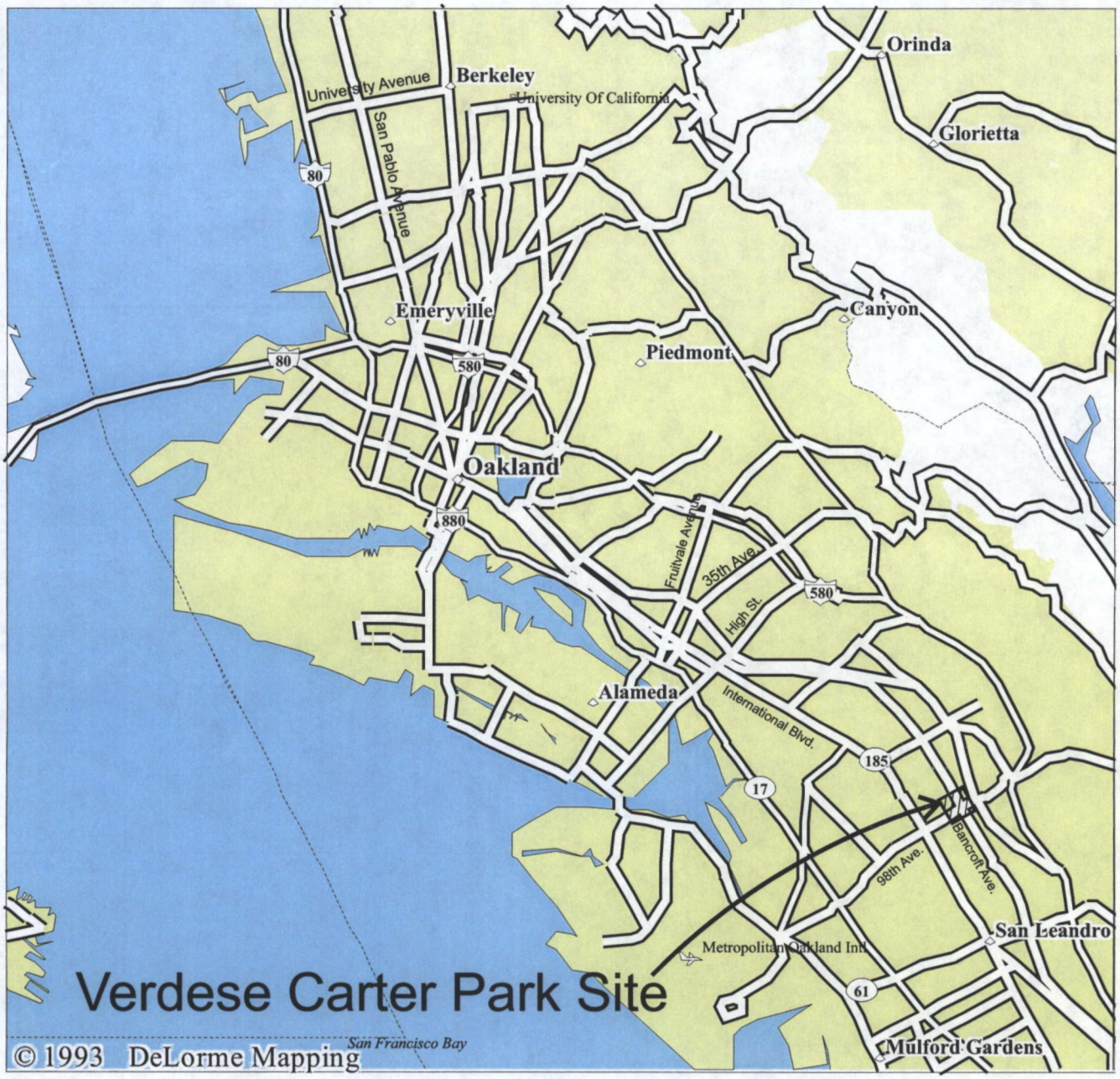
Parsons, 2000o, Site Inspection Technical Memorandum for , Parcel Number 46, Verdese Carter Park Project, Oakland, California, September 19

USEPA 1995a, Letter from Ms. Nancy Lindsay of USEPA to Mr. Lawrence Bossidy of AlliedSignal requesting that AlliedSignal provide information and voluntarily conduct investigation and remediation of residential properties near Verdese Carter Park September 11 (USEPA Administrative Record #39)

USEPA 1995b, Action Memorandum: "Request for a Removal Action at the Verdese Carter Park site, Oakland, Alameda County, CA" September 28 (USEPA Administrative Record #40)

FIGURES

Figure 1.1



Verdese Carter Park Project
AlliedSignal, Inc.

Site Location

PARSONS ENGINEERING SCIENCE, INC.

Figure 2.1

Note: Undesignated samples include both dripline and non-dripline samples

0 100 200 300 400 Feet

LEGEND

Concentrations in mg/Kg as indicated by color:

- < 500
- 501 - 800
- 801 - 1,000
- 1,001 - 1,999
- > 2,000

Sample Type:

- Yard Samples
- Undesignated Samples
- Median Samples

N

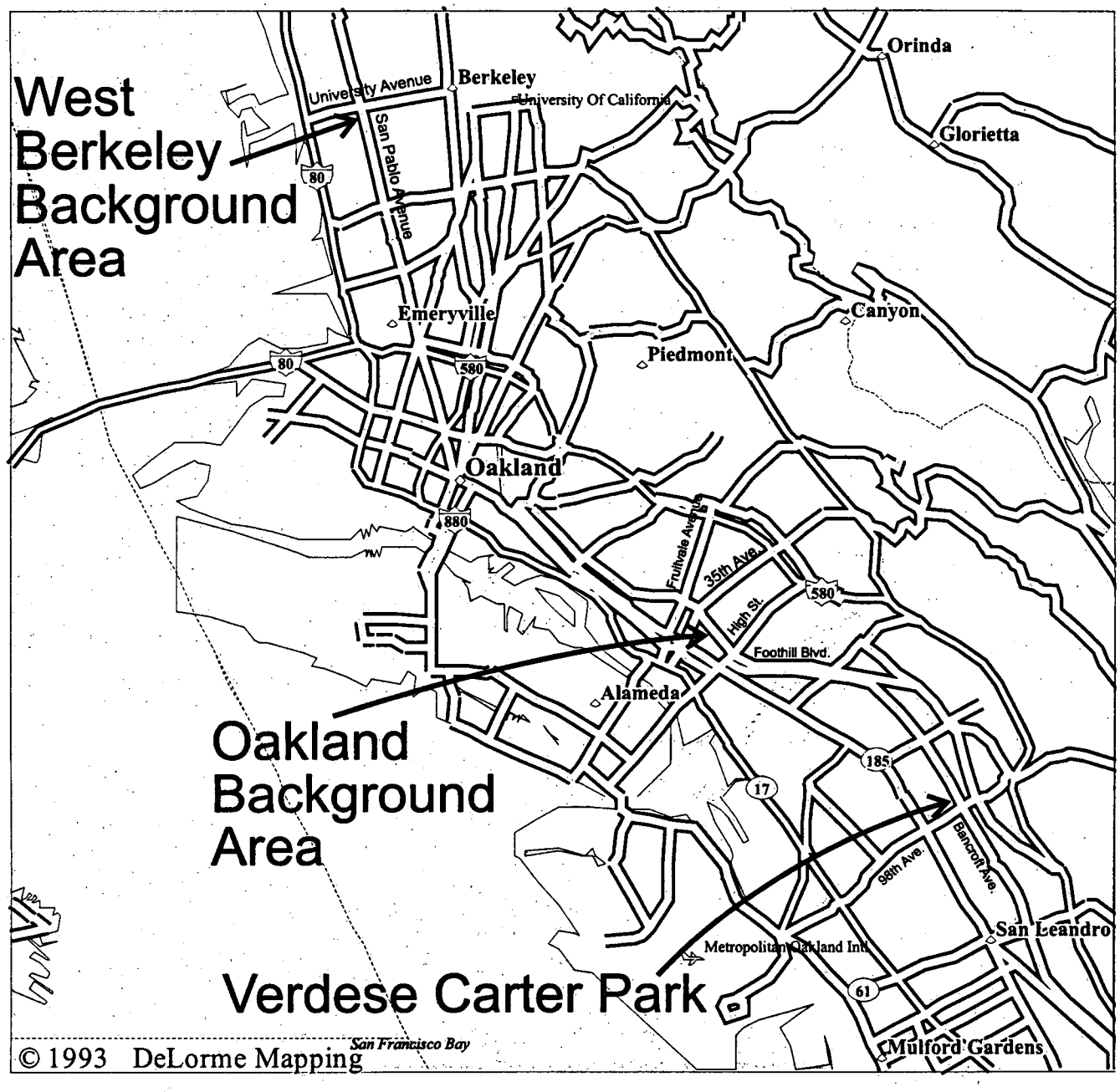
Pre-Remediation Surface Soil Lead Concentrations Excluding Known Dripline Samples

Verdese Carter Park Project
AlliedSignal, Inc.

1/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure 3.1

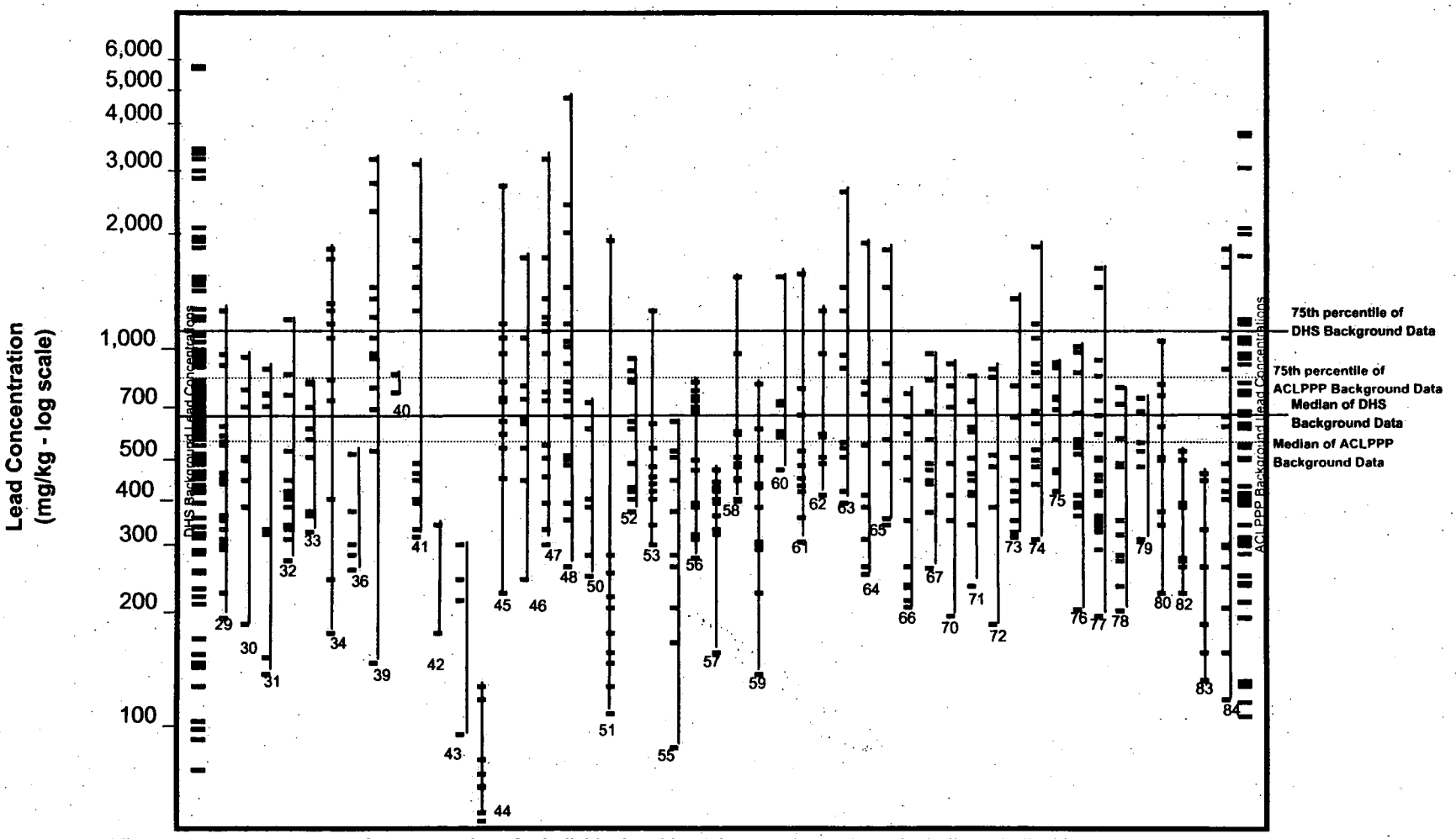


Verdese Carter Park Project
Allied Signal, Inc.

Background Area Locations

PARSONS ENGINEERING SCIENCE, INC.

Figure 4.1
Verdese Carter Park Project
Surface Soil Lead Concentrations
from Phase 3 Residential Properties and from Filtered DHS and ACLPPP Background Data



Vertical lines represent the range of concentrations for individual residential properties; tick marks indicate individual sample concentrations. Property parcel numbers are shown below the vertical lines.

The 75th percentile and the median (50th percentile) of the two background data sets are indicated by horizontal lines on the graph. Seventy-five percent of the background lead sample concentrations are less than the 75th percentile; 50 percent are less than the 50th percentile; etc.

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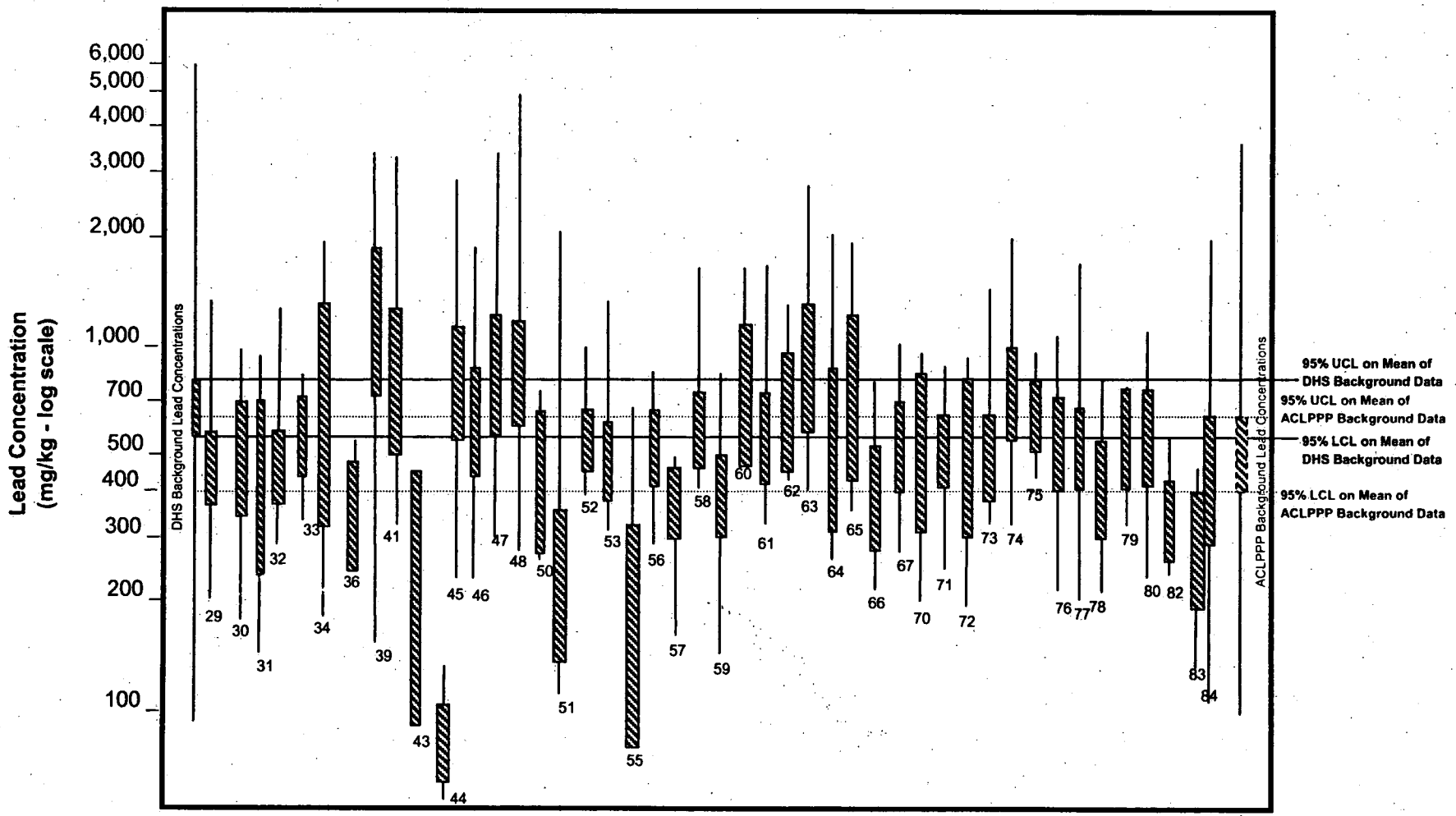
8/25/00

Figure 4.2
Verdese Carter Park Project
Surface Soil Lead Concentrations
from Phase 3 Residential Properties and from Filtered DHS and ACLPPP Background Data



Vertical lines represent the range of concentrations for individual residential properties and for the background data sets. Property parcel numbers are shown below the vertical lines.
The shaded boxes on the vertical lines enclose the 95% confidence interval on the mean for the individual properties and for the background data sets.
Results for Parcel 42 are not shown because an insufficient number of samples (2) were collected to allow calculation of a confidence interval.

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8/25/00

TABLES

TABLE 3.1

COMPARISON OF HOUSING CHARACTERISTICS IN VERDESE CARTER PARK AREA AND BACKGROUND AREAS

	Percent of Houses Built Prior to 1950	Mean Housing Construction Year	Weathering Time (Time Between Construction and Sampling)
Verdese Carter Park Phase 1,2,3	84%	1936	62 years
DHS Fruitvale Data	89%	1921	68 years
ACLPPP West Berkeley Data	84%	1925	68 years

TABLE 3.2

SUMMARY STATISTICS FOR BACKGROUND LEAD DATA SETS

	Median (mg/kg)	75th Percentile (mg/kg)	Geometric Mean (mg/kg)	Number of Samples
Fruitvale Area (Yard Samples)	666	1125	671	96
West Berkeley Area (Center-Yard Samples)	546	851	508	60

Table 4.1
Verdese Carter Park Project - AlliedSignal, Inc.

Phase 3 Site-to-Background Lead Comparisons

			Fruitvale Background Comparison				West Berkeley Background Comparison					
			Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Number of Samples Exceeding Percentile Criteria	
SAMPLE	PARCEL	LEAD (mg/kg)	50th percentile (666 mg/kg)	75th percentile (1125 mg/kg)	50th percentile	75th percentile	50th percentile (546 mg/kg)	75th percentile (851 mg/kg)	50th percentile	75th percentile	50th percentile	75th percentile
D-029-01	29	370	0	0			0	0				
D-029-02	29	300	0	0			0	0				
D-029-03	29	570	0	0			1	0				
D-029-04/05	29	465	0	0			0	0				
D-029-06	29	930	1	0			1	1				
D-029-07	29	460	0	0			0	0				
D-029-08	29	360	0	0			0	0				
D-029-09	29	310	0	0			0	0				
D-029-10	29	640	0	0			1	0				
D-029-11/12	29	995	1	0			1	1				
D-029-13	29	1300	1	1			1	1				
D-029-14	29	340	0	0			0	0				
D-029-15	29	320	0	0			0	0				
D-029-16	29	230	0	0			0	0				
D-029-17	29	450	0	0			0	0				
VCP-S-222	29	197	0	0			0	0				
VCP-S-224	29	604	0	0			1	0				
VCP-S-226	29	583	0	0			1	0				
VCP-S-227	29	481	0	0			0	0				
	29	Subtotal	3	1	15.8%	5.3%	7	3	36.8%	15.8%	none	none
		Number of Samples	19	19			19	19				
D-030-01	30	460	0	0			0	0				
D-030-02	30	720	1	0			1	0				
D-030-03/4	30	190	0	0			0	0				
D-030-05	30	390	0	0			0	0				
D-030-06	30	530	0	0			0	0				
D-030-07	30	800	1	0			1	0				
VCP-S-181	30	979	1	0			1	1				
VCP-S-184	30	519	0	0			0	0				
	30	Subtotal	3	0	37.5%	0.0%	3	1	37.5%	12.5%	none	none
		Number of Samples	8	8			8	8				
D-031-01	31	330	0	0			0	0				
D-031-02	31	910	1	0			1	1				
D-031-03/04	31	155	0	0			0	0				
D-031-05	31	140	0	0			0	0				
D-031-06	31	340	0	0			0	0				
VCP-S-623	31	330	0	0			0	0				
VCP-S-624	31	782	1	0			1	0				
VCP-S-626	31	723	1	0			1	0				
VCP-S-627	31	774	1	0			1	0				
	31	Subtotal	4	0	44.4%	0.0%	4	1	44.4%	11.1%	none	none
		Number of Samples	9	9			9	9				
D-032-01	32	280	0	0			0	0				
D-032-02	32	460	0	0			0	0				
D-032-03	32	340	0	0			0	0				
D-032-04	32	420	0	0			0	0				
D-032-05	32	350	0	0			0	0				

Table 4.1
Verdese Carter Park Project - AlliedSignal, Inc.

Phase 3 Site-to-Background Lead Comparisons

			Fruitvale Background Comparison				West Berkeley Background Comparison					
			Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Number of Samples Exceeding Percentile Criteria	
SAMPLE	PARCEL	LEAD (mg/kg)	50th percentile (666 mg/kg)	75th percentile (1125 mg/kg)	50th percentile	75th percentile	50th percentile (546 mg/kg)	75th percentile (851 mg/kg)	50th percentile	75th percentile	50th percentile	75th percentile
D-032-06	32	430	0	0			0	0				
D-032-07	32	390	0	0			0	0				
D-032-08	32	410	0	0			0	0				
D-032-09	32	320	0	0			0	0				
D-032-10/11	32	775	1	0			1	0				
D-032-12	32	880	1	0			1	1				
D-032-13	32	550	0	0			1	0				
D-032-14	32	350	0	0			0	0				
D-032-16/17	32	415	0	0			0	0				
SS-96	32	1232	1	1			1	1				
	32	Subtotal	3	1	20.0%	6.7%	4	2	26.7%	13.3%	none	none
		Number of Samples	15	15			15	15				
D-033-01	33	370	0	0			0	0				
D-033-02	33	380	0	0			0	0				
D-033-05/06	33	530	0	0			0	0				
D-033-07	33	630	0	0			1	0				
D-033-08	33	840	1	0			1	0				
D-033-09/11	33	335	0	0			0	0				
D-033-12	33	590	0	0			1	0				
D-033-13	33	720	1	0			1	0				
D-033-14	33	830	1	0			1	0				
VCP-S-329	33	718	1	0			1	0				
	33	Subtotal	4	0	40.0%	0.0%	6	0	60.0%	0.0%	1	none
		Number of Samples	10	10			10	10				
D-034-01	34	750	1	0			1	0				
D-034-02	34	180	0	0			0	0				
D-034-03	34	1100	1	0			1	1				
D-034-04	34	250	0	0			0	0				
D-034-05	34	850	1	0			1	0				
D-034-06/07	34	1785	1	1			1	1				
D-034-08	34	1900	1	1			1	1				
D-034-09	34	410	0	0			0	0				
D-034-10	34	1300	1	1			1	1				
D-034-11	34	1200	1	1			1	1				
SG-20	34	50	0	0			0	0				
SG-22	34	1360	1	1			1	1				
	34	Subtotal	8	5	66.7%	41.7%	8	6	66.7%	50.0%	2	3
		Number of Samples	12	12			12	12				
D-036-01	36	310	0	0			0	0				
D-036-02/03	36	265	0	0			0	0				
D-036-04	36	290	0	0			0	0				
D-036-05	36	380	0	0			0	0				
SG-19	36	539	0	0			0	0				
	36	Subtotal	0	0	0.0%	0.0%	0	0	0.0%	0.0%	none	none
		Number of Samples	5	5			5	5				
D-039-01/2	39	2850	1	1			1	1				
D-039-03	39	810	1	0			1	0				

Table 4.1
Verdese Carter Park Project - AlliedSignal, Inc.

Phase 3 Site-to-Background Lead Comparisons

			Fruitvale Background Comparison				West Berkeley Background Comparison					
			Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Number of Samples Exceeding Percentile Criteria	
SAMPLE	PARCEL	LEAD (mg/kg)	50th percentile (666 mg/kg)	75th percentile (1125 mg/kg)	50th percentile	75th percentile	50th percentile (546 mg/kg)	75th percentile (851 mg/kg)	50th percentile	75th percentile	50th percentile	75th percentile
D-039-04	39	1500	1	1			1	1				
D-039-05	39	710	1	0			1	0				
D-039-06	39	550	0	0			1	0				
D-039-07	39	3300	1	1			1	1				
D-039-08	39	970	1	0			1	1				
D-039-09	39	1100	1	0			1	1				
D-039-10	39	1400	1	1			1	1				
D-039-11	39	150	0	0			0	0				
D-039-12	39	2400	1	1			1	1				
D-039-13	39	1000	1	0			1	1				
D-039-14	39	2400	1	1			1	1				
D-039-15/16	39	1250	1	1			1	1				
	39	Subtotal	12	7	85.7%	50.0%	13	10	92.9%	71.4%	6	6.5
		Number of Samples	14	14			14	14				
SG-74	40	786	1	0			1	0				
SG-75	40	881	1	0			1	1				
	40	Subtotal	2	0	100.0%	0.0%	2	1	100.0%	50.0%	1	0.5
		Number of Samples	2	2			2	2				
D-041-01	41	510	0	0			0	0				
D-041-02	41	510	0	0			0	0				
D-041-03/04	41	2000	1	1			1	1				
D-041-05	41	2000	1	1			1	1				
D-041-06	41	1700	1	1			1	1				
D-041-07	41	340	0	0			0	0				
D-041-08	41	410	0	0			0	0				
D-041-09	41	1500	1	1			1	1				
D-041-10	41	3200	1	1			1	1				
D-041-11	41	1300	1	1			1	1				
D-041-12/13	41	325	0	0			0	0				
D-041-14	41	400	0	0			0	0				
D-041-15	41	460	0	0			0	0				
D-041-16	41	480	0	0			0	0				
	41	Subtotal	6	6	42.9%	42.9%	6	6	42.9%	42.9%	none	2.5
		Number of Samples	14	14			14	14				
D-042-01	42	180	0	0			0	0				
D-042-09	42	350	0	0			0	0				
	42	Subtotal	0	0	0.0%	0.0%	0	0	0.0%	0.0%	none	none
		Number of Samples	2	2			2	2				
D-043-01	43	250	0	0			0	0				
D-043-02	43	310	0	0			0	0				
D-043-03	43	97	0	0			0	0				
D-043-08/09	43	220	0	0			0	0				
	43	Subtotal	0	0	0.0%	0.0%	0	0	0.0%	0.0%	none	none
		Number of Samples	4	4			4	4				
D-044-01	44	60	0	0			0	0				
D-044-02	44	83	0	0			0	0				
D-044-03/04	44	70	0	0			0	0				

Table 4.1
Verdese Carter Park Project - AlliedSignal, Inc.

Phase 3 Site-to-Background Lead Comparisons

			Fruitvale Background Comparison				West Berkeley Background Comparison					
			Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Number of Samples Exceeding Percentile Criteria	
SAMPLE	PARCEL	LEAD (mg/kg)	50th percentile (666 mg/kg)	75th percentile (1125 mg/kg)	50th percentile	75th percentile	50th percentile (546 mg/kg)	75th percentile (851 mg/kg)	50th percentile	75th percentile	50th percentile	75th percentile
D-044-05	44	120	0	0			0	0				
D-044-06	44	120	0	0			0	0				
D-044-09	44	76	0	0			0	0				
D-044-10	44	57	0	0			0	0				
D-044-11/15	44	71	0	0			0	0				
D-044-12	44	130	0	0			0	0				
	44	Subtotal	0	0	0.0%	0.0%	0	0	0.0%	0.0%	none	none
		Number of Samples	9	9			9	9				
D-045-01/02	45	745	1	0			1	0				
D-045-03	45	660	0	0			1	0				
D-045-04	45	760	1	0			1	0				
D-045-05	45	1200	1	1			1	1				
D-045-06	45	1200	1	1			1	1				
D-045-07	45	230	0	0			0	0				
D-045-08	45	840	1	0			1	0				
D-045-09	45	1000	1	0			1	1				
D-045-10	45	560	0	0			1	0				
D-045-11	45	2800	1	1			1	1				
D-045-12/13	45	465	0	0			0	0				
D-045-14	45	1100	1	0			1	1				
D-045-15	45	610	0	0			1	0				
	45	Subtotal	8	3	61.5%	23.1%	11	5	84.6%	38.5%	4.5	1.75
		Number of Samples	13	13			13	13				
D-046-01	46	1800	1	1			1	1				
D-046-02	46	460	0	0			0	0				
D-046-03	46	1100	1	0			1	1				
D-046-07/08	46	755	1	0			1	0				
D-046-13	46	670	1	0			1	0				
D-046-14	46	250	0	0			0	0				
D-046-15	46	650	0	0			1	0				
D-046-16	46	820	1	0			1	0				
D-046-17/18	46	560	0	0			1	0				
	46	Subtotal	5	1	55.6%	11.1%	7	2	77.8%	22.2%	2.5	none
		Number of Samples	9	9			9	9				
D-047-01	47	470	0	0			0	0				
D-047-02	47	400	0	0			0	0				
D-047-03	47	1400	1	1			1	1				
D-047-04	47	1200	1	1			1	1				
D-047-05/06	47	1250	1	1			1	1				
D-047-07	47	310	0	0			0	0				
D-047-08	47	790	1	0			1	0				
D-047-09	47	3300	1	1			1	1				
D-047-10	47	750	1	0			1	0				
D-047-11	47	1000	1	0			1	1				
D-047-13	47	1800	1	1			1	1				
D-047-14	47	340	0	0			0	0				
D-047-15/16	47	570	0	0			1	0				

Table 4.1
Verdese Carter Park Project - AlliedSignal, Inc.

Phase 3 Site-to-Background Lead Comparisons

			Fruitvale Background Comparison				West Berkeley Background Comparison					
			Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Number of Samples Exceeding Percentile Criteria	
SAMPLE	PARCEL	LEAD (mg/kg)	50th percentile (666 mg/kg)	75th percentile (1125 mg/kg)	50th percentile	75th percentile	50th percentile (546 mg/kg)	75th percentile (851 mg/kg)	50th percentile	75th percentile	50th percentile	75th percentile
SS-165/220	47	527	0	0			0	0				
SS-167	47	1145	1	1			1	1				
	47	Subtotal	9	6	60.0%	40.0%	10	7	66.7%	46.7%	2.5	3.25
		Number of Samples	15	15			15	15				
D-048-01/02	48	505	0	0			0	0				
D-048-03	48	750	1	0			1	0				
D-048-04	48	2500	1	1			1	1				
D-048-05	48	940	1	0			1	1				
D-048-06	48	1500	1	1			1	1				
D-048-07	48	1200	1	1			1	1				
D-048-08	48	400	0	0			0	0				
D-048-09	48	400	0	0			0	0				
D-048-10	48	270	0	0			0	0				
D-048-11	48	680	1	0			1	0				
D-048-12	48	4800	1	1			1	1				
D-048-13/14	48	535	0	0			0	0				
D-048-15	48	2100	1	1			1	1				
D-048-16	48	790	1	0			1	0				
D-048-17	48	840	1	0			1	0				
SS-86	48	361	0	0			0	0				
SS-87	48	795	1	0			1	0				
SS-89	48	522	0	0			0	0				
SS-91	48	1078	1	0			1	1				
SS-93	48	1043	1	0			1	1				
	48	Subtotal	13	5	65.0%	25.0%	13	8	65.0%	40.0%	3	3
		Number of Samples	20	20			20	20				
D-050-01	50	290	0	0			0	0				
D-050-02/03	50	255	0	0			0	0				
D-050-04	50	410	0	0			0	0				
D-050-06	50	740	1	0			1	0				
D-050-07	50	390	0	0			0	0				
D-050-08	50	630	0	0			1	0				
	50	Subtotal	1	0	16.7%	0.0%	2	0	33.3%	0.0%	none	none
		Number of Samples	6	6			6	6				
D-051-01	51	130	0	0			0	0				
D-051-02	51	110	0	0			0	0				
D-051-03	51	260	0	0			0	0				
D-051-04/05	51	2000	1	1			1	1				
D-051-06	51	160	0	0			0	0				
D-051-07	51	210	0	0			0	0				
D-051-08	51	150	0	0			0	0				
D-051-10/11	51	225	0	0			0	0				
D-051-12	51	160	0	0			0	0				
D-051-14	51	160	0	0			0	0				
D-051-15	51	180	0	0			0	0				
D-051-16	51	290	0	0			0	0				
	51	Subtotal	1	1	8.3%	8.3%	1	1	8.3%	8.3%	none	none

Table 4.1
Verdese Carter Park Project - AlliedSignal, Inc.

Phase 3 Site-to-Background Lead Comparisons

			Fruitvale Background Comparison				West Berkeley Background Comparison					
			Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Number of Samples Exceeding Percentile Criteria	
SAMPLE	PARCEL	LEAD (mg/kg)	50th percentile (666 mg/kg)	75th percentile (1125 mg/kg)	50th percentile	75th percentile	50th percentile (546 mg/kg)	75th percentile (851 mg/kg)	50th percentile	75th percentile	50th percentile	75th percentile
		Number of Samples	12	12			12	12				
D-052-01	52	430	0	0			0	0				
D-052-02/03	52	510	0	0			0	0				
D-052-04	52	970	1	0			1	1				
D-052-05	52	900	1	0			1	1				
D-052-06	52	380	0	0			0	0				
D-052-07	52	430	0	0			0	0				
D-052-08	52	380	0	0			0	0				
D-052-09	52	850	1	0			1	0				
D-052-10	52	410	0	0			0	0				
D-052-11/12	52	440	0	0			0	0				
D-052-13	52	410	0	0			0	0				
D-052-14	52	660	0	0			1	0				
D-052-15	52	840	1	0			1	0				
D-052-16	52	510	0	0			0	0				
D-052-17	52	630	0	0			1	0				
	52	Subtotal	4	0	26.7%	0.0%	6	2	40.0%	13.3%	none	none
		Number of Samples	15	15			15	15				
D-053-01	53	560	0	0			1	0				
D-053-02	53	310	0	0			0	0				
D-053-03	53	430	0	0			0	0				
D-053-04	53	650	0	0			1	0				
D-053-05/06	53	450	0	0			0	0				
D-053-08	53	410	0	0			0	0				
D-053-09	53	350	0	0			0	0				
D-053-10	53	410	0	0			0	0				
D-053-11	53	1300	1	1			1	1				
D-053-12	53	500	0	0			0	0				
D-053-13/14	53	470	0	0			0	0				
	53	Subtotal	1	1	9.1%	9.1%	3	1	27.3%	9.1%	none	none
		Number of Samples	11	11			11	11				
D-055-01	55	550	0	0			1	0				
D-055-02	55	380	0	0			0	0				
D-055-03	55	34	0	0			0	0				
D-055-04/05	55	36	0	0			0	0				
D-055-06	55	210	0	0			0	0				
D-055-07	55	20	0	0			0	0				
D-055-08	55	290	0	0			0	0				
D-055-09	55	530	0	0			0	0				
D-055-10	55	170	0	0			0	0				
D-055-11	55	32	0	0			0	0				
D-055-12/13	55	90	0	0			0	0				
D-055-15	55	660	0	0			1	0				
D-055-16	55	270	0	0			0	0				
D-055-17	55	460	0	0			0	0				
	55	Subtotal	0	0	0.0%	0.0%	2	0	14.3%	0.0%	none	none
		Number of Samples	14	14			14	14				

Table 4.1
Verdese Carter Park Project - AlliedSignal, Inc.

Phase 3 Site-to-Background Lead Comparisons

			Fruitvale Background Comparison				West Berkeley Background Comparison					
			Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Number of Samples Exceeding Percentile Criteria	
SAMPLE	PARCEL	LEAD (mg/kg)	50th percentile (666 mg/kg)	75th percentile (1125 mg/kg)	50th percentile	75th percentile	50th percentile (546 mg/kg)	75th percentile (851 mg/kg)	50th percentile	75th percentile	50th percentile	75th percentile
D-056-01	56	390	0	0			0	0				
D-056-02/08	56	285	0	0			0	0				
D-056-04	56	840	1	0			1	0				
D-056-05	56	750	1	0			1	0				
D-056-06	56	320	0	0			0	0				
D-056-07	56	400	0	0			0	0				
D-056-09	56	720	1	0			1	0				
D-056-10	56	330	0	0			0	0				
D-056-11/12	56	700	1	0			1	0				
D-056-13	56	520	0	0			0	0				
VCP-S-61	56	489	0	0			0	0				
VCP-S-63	56	796	1	0			1	0				
VCP-S-65	56	768	1	0			1	0				
	56	Subtotal	6	0	46.2%	0.0%	6	0	46.2%	0.0%	none	none
		Number of Samples	13	13			13	13				
D-057-01	57	410	0	0			0	0				
D-057-02	57	430	0	0			0	0				
D-057-03	57	440	0	0			0	0				
D-057-04/05	57	455	0	0			0	0				
D-057-06	57	330	0	0			0	0				
D-057-07	57	160	0	0			0	0				
D-057-08	57	490	0	0			0	0				
D-057-09	57	370	0	0			0	0				
D-057-10	57	340	0	0			0	0				
D-057-11	57	400	0	0			0	0				
	57	Subtotal	0	0	0.0%	0.0%	0	0	0.0%	0.0%	none	none
		Number of Samples	10	10			10	10				
D-058-01	58	530	0	0			0	0				
D-058-02	58	460	0	0			0	0				
D-058-03	58	410	0	0			0	0				
D-058-04	58	500	0	0			0	0				
D-058-05/06	58	405	0	0			0	0				
D-058-07/08	58	465	0	0			0	0				
D-058-09	58	410	0	0			0	0				
D-058-11	58	620	0	0			1	0				
D-058-12	58	1000	1	0			1	1				
D-058-13	58	610	0	0			1	0				
D-058-14	58	620	0	0			1	0				
D-058-15	58	1600	1	1			1	1				
D-058-16	58	510	0	0			0	0				
	58	Subtotal	2	1	15.4%	7.7%	5	2	38.5%	15.4%	none	none
		Number of Samples	13	13			13	13				
D-059-01	59	520	0	0			0	0				
D-059-02	59	530	0	0			0	0				
D-059-03/04	59	630	0	0			1	0				
D-059-05	59	830	1	0			1	0				
D-059-07	59	450	0	0			0	0				

Table 4.1
Verdese Carter Park Project - AlliedSignal, Inc.

Phase 3 Site-to-Background Lead Comparisons

			Fruitvale Background Comparison				West Berkeley Background Comparison					
			Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Number of Samples Exceeding Percentile Criteria	
SAMPLE	PARCEL	LEAD (mg/kg)	50th percentile (666 mg/kg)	75th percentile (1125 mg/kg)	50th percentile	75th percentile	50th percentile (546 mg/kg)	75th percentile (851 mg/kg)	50th percentile	75th percentile	50th percentile	75th percentile
D-059-08	59	230	0	0			0	0				
D-059-09	59	440	0	0			0	0				
D-059-10	59	140	0	0			0	0				
D-059-11	59	300	0	0			0	0				
D-059-12	59	630	0	0			1	0				
D-059-13	59	390	0	0			0	0				
D-059-14	59	450	0	0			0	0				
D-059-15	59	230	0	0			0	0				
D-059-16	59	310	0	0			0	0				
D-059-17/18	59	315	0	0			0	0				
	59	Subtotal	1	0	6.7%	0.0%	3	0	20.0%	0.0%	none	none
		Number of Samples	15	15			15	15				
D-060-01	60	620	0	0			1	0				
D-060-02/03	60	745	1	0			1	0				
D-060-05	60	1600	1	1			1	1				
D-060-06	60	600	0	0			1	0				
D-060-07	60	490	0	0			0	0				
D-060-08	60	730	1	0			1	0				
	60	Subtotal	3	1	50.0%	16.7%	5	1	83.3%	16.7%	2	none
		Number of Samples	6	6			6	6				
Parcel 61 - Original Data Set												
D-061-01/02	61	315.5	0	0			0	0				
D-061-03	61	687	1	0			1	0				
D-061-04	61	466	0	0			0	0				
D-061-05	61	807	1	0			1	0				
D-061-06	61	503	0	0			0	0				
D-061-07	61	429	0	0			0	0				
D-061-08	61	445	0	0			0	0				
D-061-09	61	550	0	0			1	0				
D-061-10	61	366	0	0			0	0				
D-061-11	61	1630	1	1			1	1				
	61	Subtotal	3	1	30.0%	10.0%	4	1	40.0%	10.0%	none	none
		Number of Samples	10	10			10	10				
Parcel 61 - Supplemental Random Back Yard Data Set												
D-061-03	61	687	1	0			1	0				
D-061-05	61	807	1	0			1	0				
D-061-06	61	503	0	0			0	0				
D-061-07	61	429	0	0			0	0				
D-061-08	61	445	0	0			0	0				
D-061-09	61	550	0	0			1	0				
D-061-10	61	366	0	0			0	0				
D-061-12	61	350	0	0			0	0				
D-061-13	61	1300	1	1			1	1				
D-061-14	61	490	0	0			0	0				
D-061-15	61	800	1	0			1	0				
D-061-16	61	450	0	0			0	0				
D-061-17	61	730	1	0			1	0				

Table 4.1
Verdese Carter Park Project - AlliedSignal, Inc.

Phase 3 Site-to-Background Lead Comparisons

			Fruitvale Background Comparison				West Berkeley Background Comparison					
			Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Number of Samples Exceeding Percentile Criteria	
SAMPLE	PARCEL	LEAD (mg/kg)	50th percentile (666 mg/kg)	75th percentile (1125 mg/kg)	50th percentile	75th percentile	50th percentile (546 mg/kg)	75th percentile (851 mg/kg)	50th percentile	75th percentile	50th percentile	75th percentile
	61	Subtotal	5	1	38.5%	7.7%	6	1	46.2%	7.7%	none	none
		Number of Samples	13	13			13	13				
D-062-01	62	420	0	0			0	0				
D-062-02/03	62	510	0	0			0	0				
D-062-04	62	610	0	0			1	0				
D-062-05	62	600	0	0			1	0				
D-062-06	62	1000	1	0			1	1				
D-062-07	62	530	0	0			0	0				
D-062-08	62	1300	1	1			1	1				
	62	Subtotal	2	1	28.6%	14.3%	4	2	57.1%	28.6%	0.5	0.25
		Number of Samples	7	7			7	7				
D-063-01	63	1300	1	1			1	1				
D-063-02	63	1500	1	1			1	1				
D-063-03/04	63	915	1	0			1	1				
D-063-05	63	580	0	0			1	0				
D-063-06	63	530	0	0			0	0				
D-063-07	63	560	0	0			1	0				
D-063-08	63	2700	1	1			1	1				
D-063-09	63	400	0	0			0	0				
D-063-10	63	990	1	0			1	1				
D-063-11	63	1300	1	1			1	1				
D-063-12/13	63	430	0	0			0	0				
	63	Subtotal	6	4	54.5%	36.4%	8	6	72.7%	54.5%	2.5	3.25
		Number of Samples	11	11			11	11				
D-064-01	64	420	0	0			0	0				
D-064-02	64	270	0	0			0	0				
D-064-04	64	570	0	0			1	0				
D-064-05/06	64	390	0	0			0	0				
D-064-07	64	320	0	0			0	0				
VCP-S-536	64	781	1	0			1	0				
VCP-S-537	64	840	1	0			1	0				
VCP-S-539	64	258	0	0			0	0				
VCP-S-540	64	1967	1	1			1	1				
	64	Subtotal	3	1	33.3%	11.1%	4	1	44.4%	11.1%	none	none
		Number of Samples	9	9			9	9				
D-065-01	65	1500	1	1			1	1				
D-065-02	65	940	1	0			1	1				
D-065-03	65	590	0	0			1	0				
D-065-04	65	350	0	0			0	0				
D-065-13/14	65	510	0	0			0	0				
VCP-S-506/5	65	364	0	0			0	0				
VCP-S-508	65	749	1	0			1	0				
VCP-S-509	65	1888	1	1			1	1				
	65	Subtotal	4	2	50.0%	25.0%	5	3	62.5%	37.5%	1	1
		Number of Samples	8	8			8	8				
D-066-01/02	66	270	0	0			0	0				
D-066-03	66	220	0	0			0	0				

Table 4.1
Verdese Carter Park Project - AlliedSignal, Inc.

Phase 3 Site-to-Background Lead Comparisons

			Fruitvale Background Comparison				West Berkeley Background Comparison					
			Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Number of Samples Exceeding Percentile Criteria	
SAMPLE	PARCEL	LEAD (mg/kg)	50th percentile (666 mg/kg)	75th percentile (1125 mg/kg)	50th percentile	75th percentile	50th percentile (546 mg/kg)	75th percentile (851 mg/kg)	50th percentile	75th percentile	50th percentile	75th percentile
D-066-04	66	530	0	0			0	0				
D-066-05	66	680	1	0			1	0				
D-066-06	66	360	0	0			0	0				
VCP-S-408/4	66	242	0	0			0	0				
VCP-S-410	66	238	0	0			0	0				
VCP-S-411	66	211	0	0			0	0				
VCP-S-413	66	461	0	0			0	0				
VCP-S-414	66	612	0	0			1	0				
VCP-S-416	66	782	1	0			1	0				
	66	Subtotal	2	0	18.2%	0.0%	3	0	27.3%	0.0%	none	none
		Number of Samples	11	11			11	11				
D-067-01	67	1000	1	0			1	1				
D-067-02	67	450	0	0			0	0				
D-067-03	67	510	0	0			0	0				
D-067-04	67	590	0	0			1	0				
D-067-05/06	67	850	1	0			1	0				
D-067-07	67	700	1	0			1	0				
D-067-08	67	490	0	0			0	0				
VCP-S-510	67	378	0	0			0	0				
VCP-S-511	67	459	0	0			0	0				
VCP-S-517	67	268	0	0			0	0				
	67	Subtotal	3	0	30.0%	0.0%	4	1	40.0%	10.0%	none	none
		Number of Samples	10	10			10	10				
D-070-01	70	200	0	0			0	0				
D-070-02	70	360	0	0			0	0				
D-070-03/04	70	510	0	0			0	0				
D-070-07	70	420	0	0			0	0				
D-070-08	70	820	1	0			1	0				
D-070-09	70	720	1	0			1	0				
D-070-10	70	940	1	0			1	1				
	70	Subtotal	3	0	42.9%	0.0%	3	1	42.9%	14.3%	none	none
		Number of Samples	7	7			7	7				
D-071-01	71	240	0	0			0	0				
D-071-02	71	420	0	0			0	0				
D-071-03/04	71	460	0	0			0	0				
D-071-05	71	620	0	0			1	0				
D-071-06	71	870	1	0			1	1				
D-071-07	71	480	0	0			0	0				
D-071-08	71	750	1	0			1	0				
VCP-S-206	71	350	0	0			0	0				
VCP-S-209	71	527	0	0			0	0				
VCP-S-210	71	427	0	0			0	0				
VCP-S-211	71	744	1	0			1	0				
VCP-S-212	71	638	0	0			1	0				
	71	Subtotal	3	0	25.0%	0.0%	5	1	41.7%	8.3%	none	none
		Number of Samples	12	12			12	12				
D-072-01	72	500	0	0			0	0				

Table 4.1
Verdese Carter Park Project - AlliedSignal, Inc.

Phase 3 Site-to-Background Lead Comparisons

			Fruitvale Background Comparison				West Berkeley Background Comparison					
			Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Number of Samples Exceeding Percentile Criteria	
SAMPLE	PARCEL	LEAD (mg/kg)	50th percentile (666 mg/kg)	75th percentile (1125 mg/kg)	50th percentile	75th percentile	50th percentile (546 mg/kg)	75th percentile (851 mg/kg)	50th percentile	75th percentile	50th percentile	75th percentile
D-072-02	72	910	1	0			1	1				
D-072-03	72	390	0	0			0	0				
D-072-04/05	72	190	0	0			0	0				
D-072-07	72	500	0	0			0	0				
SS-157	72	865	1	0			1	1				
SS-159	72	537	0	0			0	0				
	72	Subtotal	2	0	28.6%	0.0%	2	2	28.6%	28.6%	none	0.25
		Number of Samples	7	7			7	7				
D-073-01	73	1400	1	1			1	1				
D-073-02	73	680	1	0			1	0				
D-073-03/04	73	335	0	0			0	0				
D-073-05	73	530	0	0			0	0				
D-073-06	73	820	1	0			1	0				
D-073-07	73	360	0	0			0	0				
D-073-08	73	430	0	0			0	0				
D-073-09	73	460	0	0			0	0				
D-073-11/12	73	325	0	0			0	0				
D-073-15	73	360	0	0			0	0				
D-073-16	73	360	0	0			0	0				
SS-43	73	406	0	0			0	0				
SS-45/208	73	677	1	0			1	0				
	73	Subtotal	4	1	30.8%	7.7%	4	1	30.8%	7.7%	none	none
		Number of Samples	13	13			13	13				
D-074-01	74	940	1	0			1	1				
D-074-02	74	1100	1	0			1	1				
D-074-03	74	520	0	0			0	0				
D-074-04	74	1200	1	1			1	1				
D-074-05/06	74	555	0	0			1	0				
D-074-10	74	890	1	0			1	1				
D-074-12	74	320	0	0			0	0				
D-074-13	74	500	0	0			0	0				
D-074-15/16	74	650	0	0			1	0				
SS-36	74	702	1	0			1	0				
SS-37	74	821	1	0			1	0				
SS-39	74	1928	1	1			1	1				
SS-41	74	449	0	0			0	0				
	74	Subtotal	7	2	53.8%	15.4%	9	5	69.2%	38.5%	2.5	1.75
		Number of Samples	13	13			13	13				
BH-4-S	75	754	1	0			1	0				
D-075-01	75	490	0	0			0	0				
D-075-02	75	430	0	0			0	0				
D-075-03/04	75	710	1	0			1	0				
D-075-05	75	590	0	0			1	0				
SG-5	75	766	1	0			1	0				
SG-7	75	483	0	0			0	0				
SS-131	75	947	1	0			1	1				
SS-133	75	918	1	0			1	1				

Table 4.1
Verdese Carter Park Project - AlliedSignal, Inc.

Phase 3 Site-to-Background Lead Comparisons

			Fruitvale Background Comparison				West Berkeley Background Comparison					
			Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Number of Samples Exceeding Percentile Criteria	
SAMPLE	PARCEL	LEAD (mg/kg)	50th percentile (666 mg/kg)	75th percentile (1125 mg/kg)	50th percentile	75th percentile	50th percentile (546 mg/kg)	75th percentile (851 mg/kg)	50th percentile	75th percentile	50th percentile	75th percentile
	75	Subtotal	5	0	55.6%	0.0%	6	2	66.7%	22.2%	1.5	none
		Number of Samples	9	9			9	9				
BH-35-S	76	1045	1	0			1	1				
D-076-01	76	890	1	0			1	1				
D-076-03	76	540	0	0			0	0				
D-076-04	76	590	0	0			1	0				
D-076-05/06	76	1010	1	0			1	1				
D-076-07	76	370	0	0			0	0				
D-076-08	76	420	0	0			0	0				
D-076-09	76	400	0	0			0	0				
D-076-10	76	390	0	0			0	0				
D-076-12/13	76	695	1	0			1	0				
SG-11	76	208	0	0			0	0				
SG-33	76	578	0	0			1	0				
SG-36	76	563	0	0			1	0				
	76	Subtotal	4	0	30.8%	0.0%	7	3	53.8%	23.1%	0.5	none
		Number of Samples	13	13			13	13				
D-077-01	77	610	0	0			1	0				
D-077-02	77	340	0	0			0	0				
D-077-03	77	520	0	0			0	0				
D-077-04	77	430	0	0			0	0				
D-077-05	77	300	0	0			0	0				
D-077-06	77	370	0	0			0	0				
D-077-07	77	200	0	0			0	0				
D-077-08/09	77	335	0	0			0	0				
D-077-10	77	750	1	0			1	0				
D-077-11	77	360	0	0			0	0				
D-077-12	77	350	0	0			0	0				
D-077-13	77	960	1	0			1	1				
D-077-14	77	870	1	0			1	1				
D-077-15/16	77	1500	1	1			1	1				
VCP-S-1	77	528	0	0			0	0				
VCP-S-2	77	1688	1	1			1	1				
VCP-S-3	77	459	0	0			0	0				
VCP-S-4	77	475	0	0			0	0				
VCP-S-5	77	685	1	0			1	0				
VCP-S-8	77	420	0	0			0	0				
	77	Subtotal	6	2	30.0%	10.0%	7	4	35.0%	20.0%	none	none
		Number of Samples	20	20			20	20				
D-078-01	78	510	0	0			0	0				
D-078-02	78	500	0	0			0	0				
D-078-03	78	280	0	0			0	0				
D-078-04	78	330	0	0			0	0				
D-078-05/06	78	290	0	0			0	0				
D-078-07	78	240	0	0			0	0				
D-078-08	78	360	0	0			0	0				
VCP-S-434/4	78	207	0	0			0	0				

Table 4.1
Verdese Carter Park Project - AlliedSignal, Inc.

Phase 3 Site-to-Background Lead Comparisons

			Fruitvale Background Comparison				West Berkeley Background Comparison					
			Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Number of Samples Exceeding Percentile Criteria	
SAMPLE	PARCEL	LEAD (mg/kg)	50th percentile (666 mg/kg)	75th percentile (1125 mg/kg)	50th percentile	75th percentile	50th percentile (546 mg/kg)	75th percentile (851 mg/kg)	50th percentile	75th percentile	50th percentile	75th percentile
VCP-S-437	78	812	1	0			1	0				
VCP-S-438	78	733	1	0			1	0				
VCP-S-439	78	594	0	0			1	0				
	78	Subtotal	2	0	18.2%	0.0%	3	0	27.3%	0.0%	none	none
		Number of Samples	11	11			11	11				
D-079-01	79	550	0	0			1	0				
D-079-02/03	79	320	0	0			0	0				
D-079-04	79	580	0	0			1	0				
D-079-05	79	760	1	0			1	0				
D-079-06	79	700	1	0			1	0				
D-079-07	79	500	0	0			0	0				
	79	Subtotal	2	0	33.3%	0.0%	4	0	66.7%	0.0%	1	none
		Number of Samples	6	6			6	6				
D-080-01	80	350	0	0			0	0				
D-080-02	80	230	0	0			0	0				
D-080-04	80	530	0	0			0	0				
D-080-05	80	640	0	0			1	0				
D-080-06	80	520	0	0			0	0				
D-080-09	80	380	0	0			0	0				
VCP-S-445	80	829	1	0			1	0				
VCP-S-446	80	773	1	0			1	0				
VCP-S-447	80	1081	1	0			1	1				
	80		3	0	33.3%	0.0%	4	1	44.4%	11.1%	none	none
			9	9			9	9				
D-082-01	82	270	0	0			0	0				
D-082-02	82	390	0	0			0	0				
D-082-03	82	400	0	0			0	0				
D-082-04	82	280	0	0			0	0				
D-082-05	82	230	0	0			0	0				
D-082-06	82	520	0	0			0	0				
D-082-07/08	82	285	0	0			0	0				
D-082-09	82	230	0	0			0	0				
D-082-10	82	550	0	0			1	0				
	82	Subtotal	0	0	0.0%	0.0%	1	0	11.1%	0.0%	none	none
		Number of Samples	9	9			9	9				
D-083-01	83	160	0	0			0	0				
D-083-02	83	460	0	0			0	0				
D-083-03	83	190	0	0			0	0				
D-083-04	83	340	0	0			0	0				
D-083-05	83	270	0	0			0	0				
D-083-06/07	83	135	0	0			0	0				
D-083-08	83	480	0	0			0	0				
D-083-09	83	270	0	0			0	0				
D-083-10	83	460	0	0			0	0				
	83	Subtotal	0	0	0.0%	0.0%	0	0	0.0%	0.0%	none	none
		Number of Samples	9	9			9	9				
D-084-01/02	84	680	1	0			1	0				

Table 4.1
Verdese Carter Park Project - AlliedSignal, Inc.

Phase 3 Site-to-Background Lead Comparisons

			Fruitvale Background Comparison				West Berkeley Background Comparison					
			Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Samples Greater Than Background Percentile		% of Samples Greater Than Background Percentile		Number of Samples Exceeding Percentile Criteria	
SAMPLE	PARCEL	LEAD (mg/kg)	50th percentile (666 mg/kg)	75th percentile (1125 mg/kg)	50th percentile	75th percentile	50th percentile (546 mg/kg)	75th percentile (851 mg/kg)	50th percentile	75th percentile	50th percentile	75th percentile
D-084-03	84	640	0	0			1	0				
D-084-04	84	310	0	0			0	0				
D-084-05/06	84	305	0	0			0	0				
D-084-07	84	1900	1	1			1	1				
D-084-08	84	460	0	0			0	0				
D-084-09	84	1700	1	1			1	1				
D-084-10	84	160	0	0			0	0				
D-084-11	84	1100	1	0			1	1				
D-084-12	84	510	0	0			0	0				
D-084-13	84	270	0	0			0	0				
D-084-14	84	430	0	0			0	0				
D-084-15/16	84	410	0	0			0	0				
D-084-17	84	120	0	0			0	0				
D-084-18	84	160	0	0			0	0				
D-084-19	84	210	0	0			0	0				
D-084-20	84	270	0	0			0	0				
D-084-21	84	910	1	0			1	1				
	84	Subtotal	5	2	27.8%	11.1%	6	4	33.3%	22.2%	none	none
		Number of Samples	18	18			18	18				

Note: A "1" in any row containing a sample result denotes a sample with a lead concentration greater than the background percentile criterion.
A "0" denotes a sample with a lead concentration less than the background percentile criterion.

Table 5.1
Verdese Carter Park Project
Status of Phase 1, 2 and 3 Properties

	Parcel	Sampling Status	Soil Removal Status
PHASE 1 SITES			
	2	X	X
	3	X	X
	4	X	X
	5	X	X
	6	no access*	NFA*
	9	X	X
PHASE 2 SITES			
	1	X	X
	7	X	X
	8	X	X
	10	X	X
	11	X	X
	12	X	X
	13	X	X
	14	only partial access obtained*	NFA
	15	X	X
	16	X	X
	17	X	X
	18	X	NFA
	19	X	X
	20	X	remediation recommended - access denied
	21	X	X
	22	X	X
	23	X	X
	24	X	X
	25	X	X
	26	X	X
	27	no access*	NFA*
	28	X	X

Table 5.1
Verdese Carter Park Project
Status of Phase 1, 2 and 3 Properties

Address	Parcel	Sampling Status	Soil Removal Status
PHASE 3 SITES			
	29	X	NFA
	30	X	NFA
	31	X	NFA
	32	X	NFA
	33	X	NFA
	34	X	X
	35	unable to sample	NFA
	36	X	NFA
	37	no access	NFA
	38	no access*	NFA
	39	X	X
	40	X	X
	41	X	X
	42	X	NFA
	43	X	NFA
	44	X	NFA
	45	X	X
	46	X	X
	47	X	X
	48	X	X
	49	no access*	NFA
	50	X	NFA
	51	X	NFA
	52	X	NFA
	53	X	NFA
	54	no access	NFA
	55	X	NFA
	56	X	NFA
	57	X	NFA
	58	X	NFA

Table 5.1
Verdese Carter Park Project
Status of Phase 1, 2 and 3 Properties

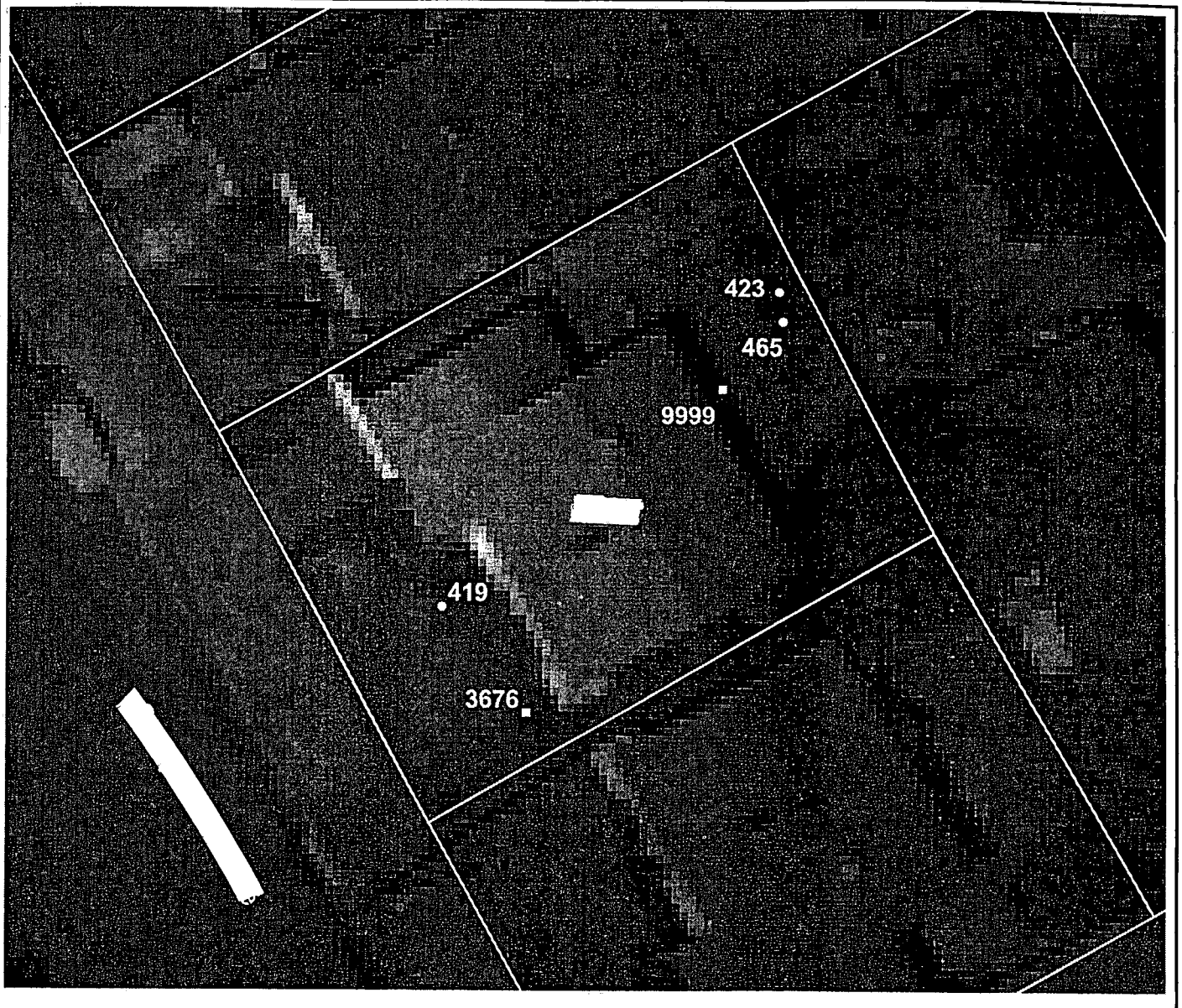
	Parcel	Sampling Status	Soil Removal Status
	59	X	NFA
	60	X	X
	61	X	X
	62	X	NFA
	63	X	X
	64	X	NFA
	65	X	NFA
	66	X	NFA
	67	X	NFA
	68	no access*	NFA
	69	no access*	NFA
	70	X	NFA
	71	X	NFA
	72	X	NFA
	73	X	NFA
	74	X	X
	75	X	X
	76	X	NFA
	77	X	NFA
	78	X	NFA
	79	X	NFA
	80	X	NFA
	81	no access	NFA
	82	X	NFA
	83	X	NFA
	84	X	NFA
	85	no access	NFA

X = Work Complete
NFA = No Further Action
no access = access not obtained from property owner
partial access = access to entire property not obtained from property owner
* Limited sampling previously conducted by EPA

APPENDIX A

PROPERTY-SPECIFIC FIGURES AND DATA TABLES

Figure A-006-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate
- SI Samples were not collected at this property because access was denied. Analytical results shown were obtained from limited samplling previously conducted by EPA.

N

0 10 20 30 40 Feet

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample
- 9999 Lead Concentration in mg/Kg
- 9999 C denotes composite lead concentration of combined dripline samples

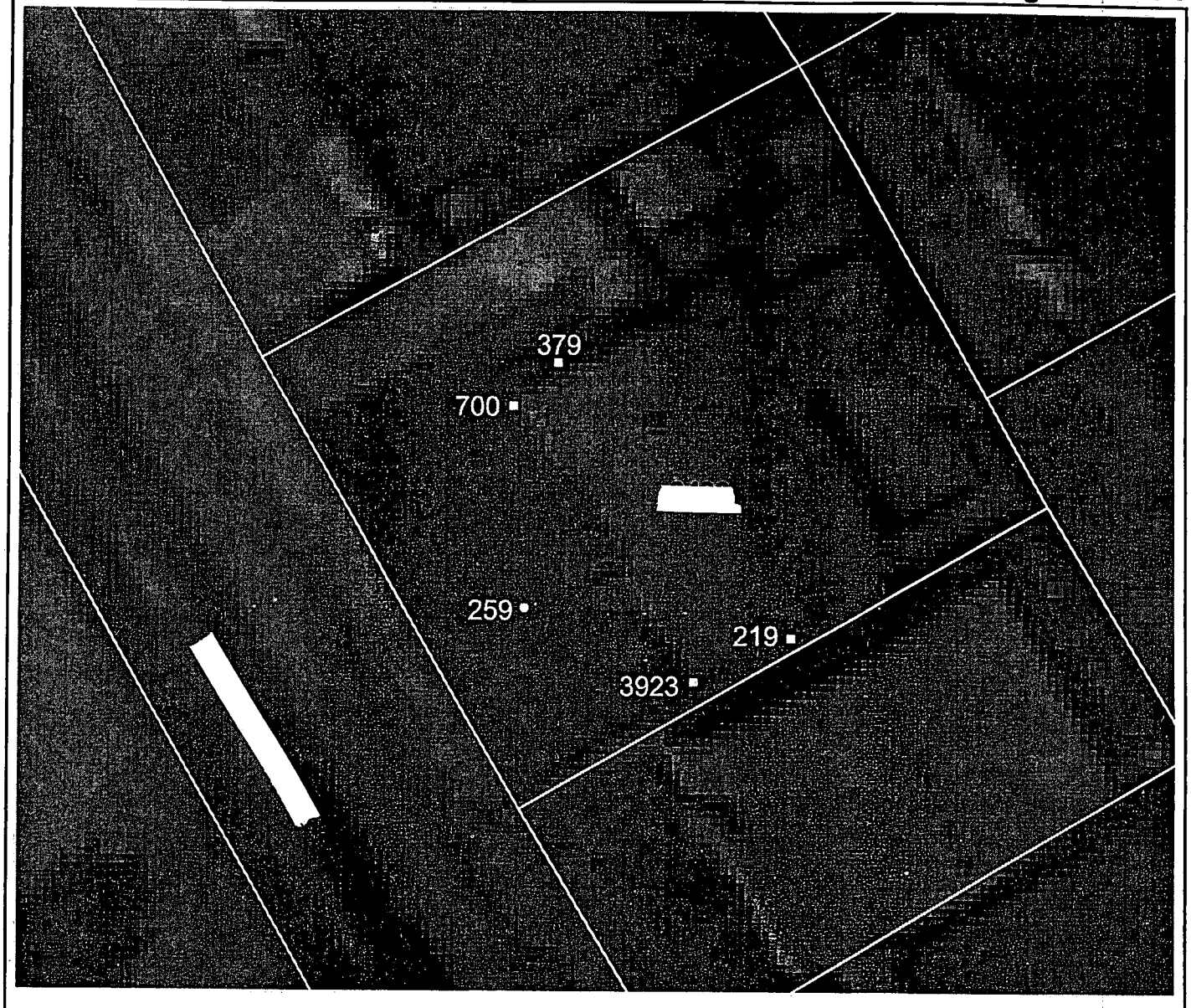
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

09/01/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-014-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate
- SI Samples were not collected at this property because access was denied. Analytical results shown were obtained from limited sampling previously conducted by EPA.

0 10 20 30 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999/C C denotes composite lead concentration of combined dripline samples

Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

09/01/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-027-1

- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate
- SI Samples were not collected at this property because access was denied. Analytical results shown were obtained from limited samplling previously conducted by EPA.

0 20 40 60 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

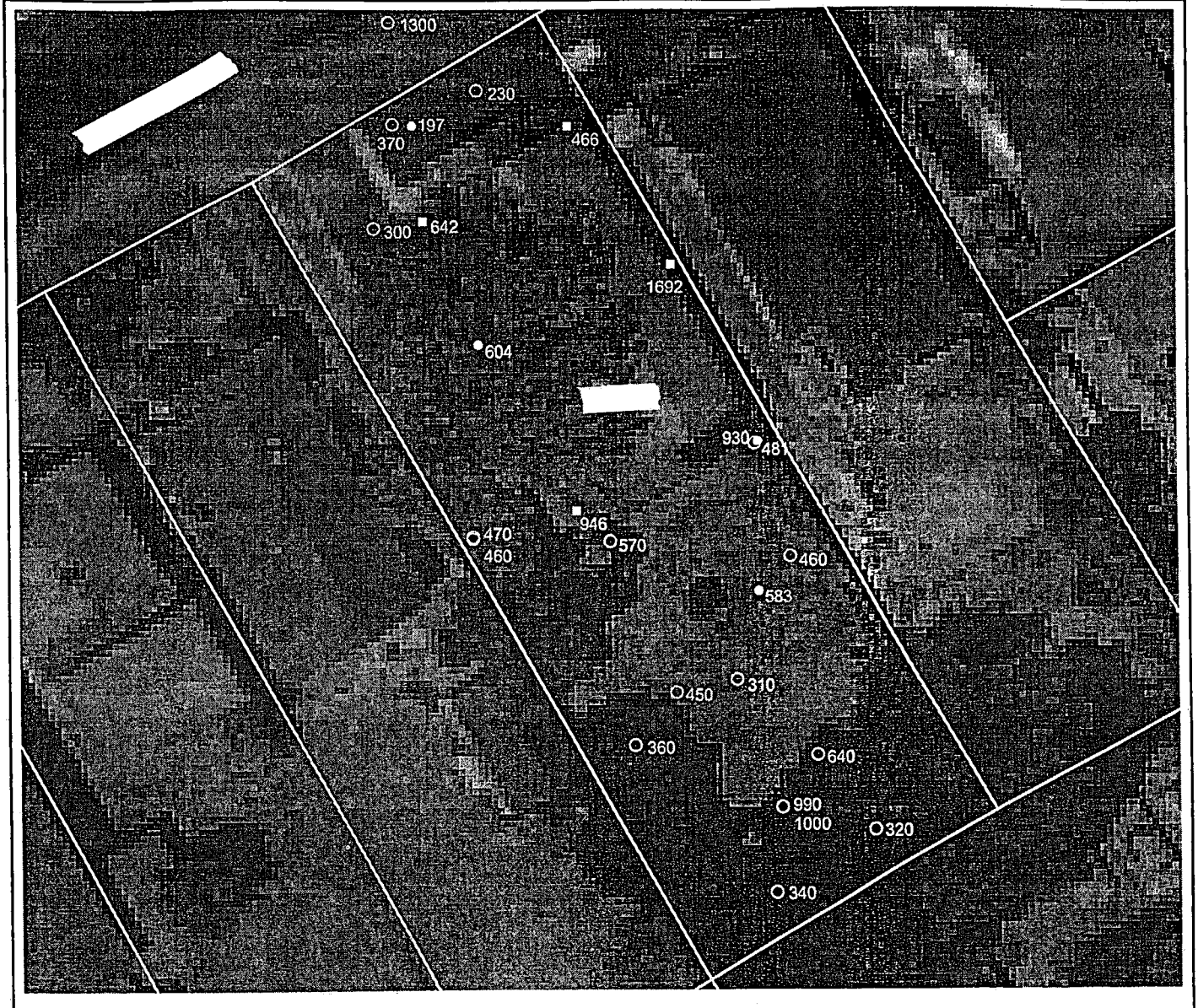
9999(C) C denotes composite lead concentration of combined dripline samples

Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

09/11/00

Figure A-029-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 10 20 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples

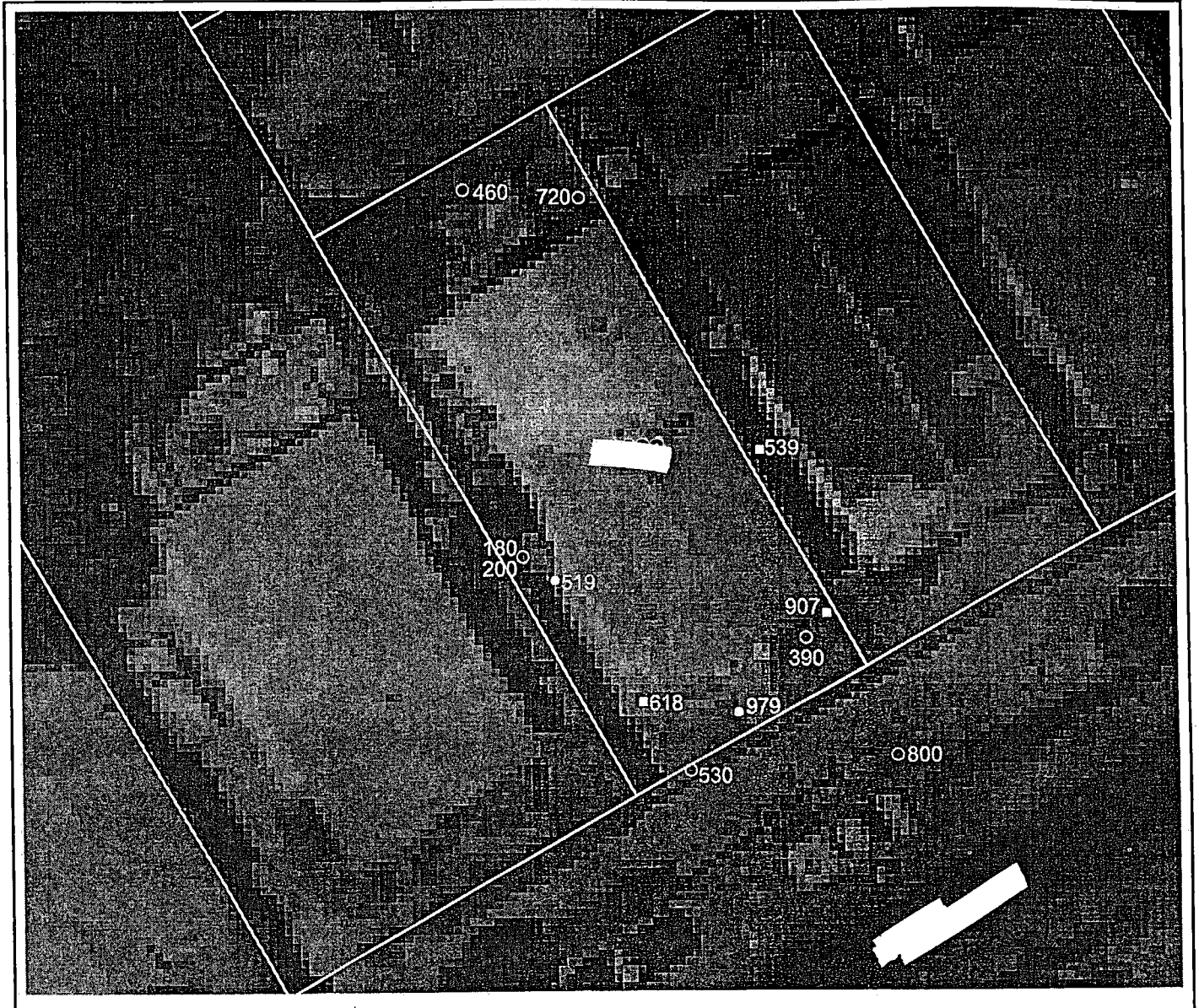
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-030-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 10 20 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples

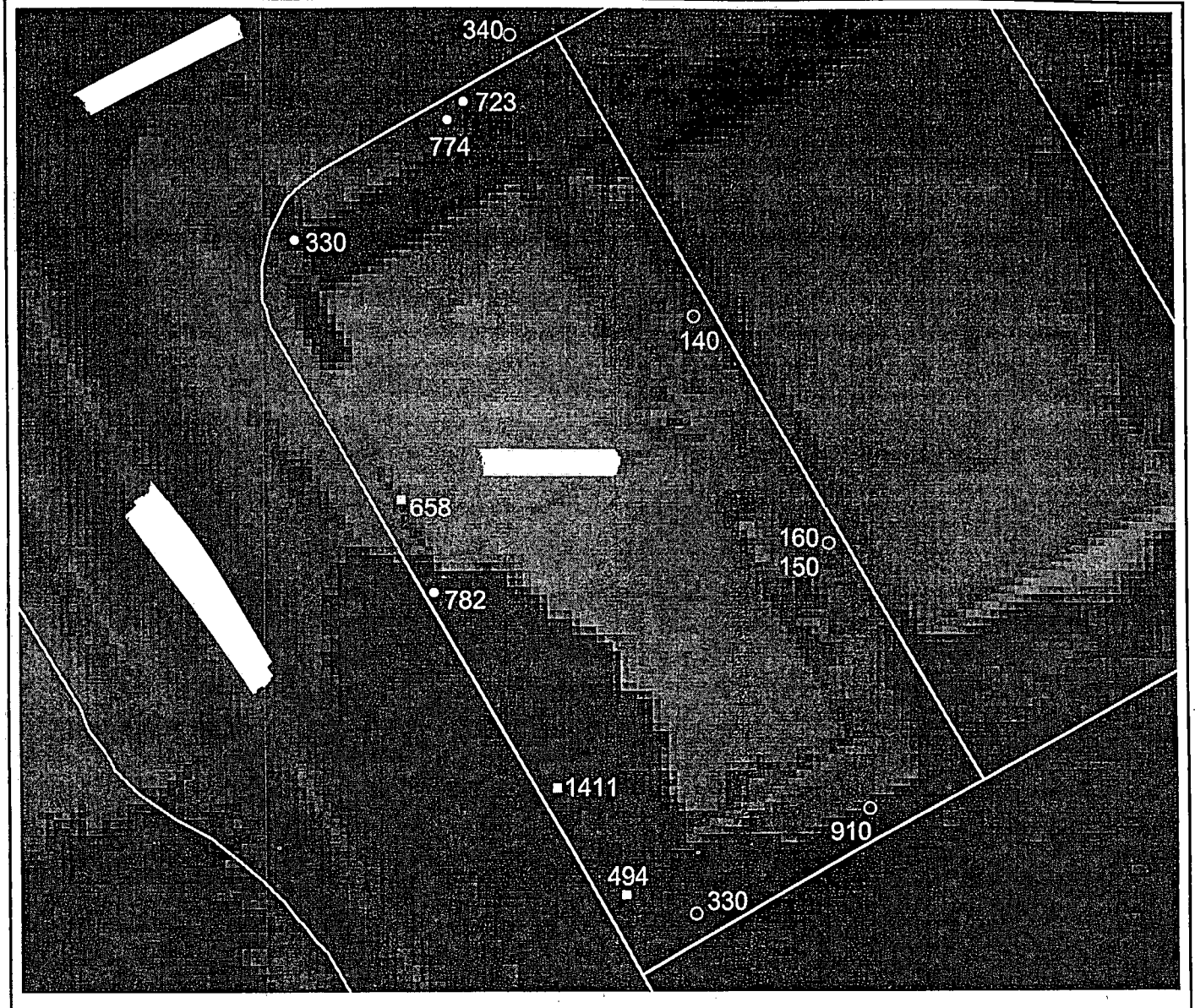
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/20/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-031-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 10 20 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

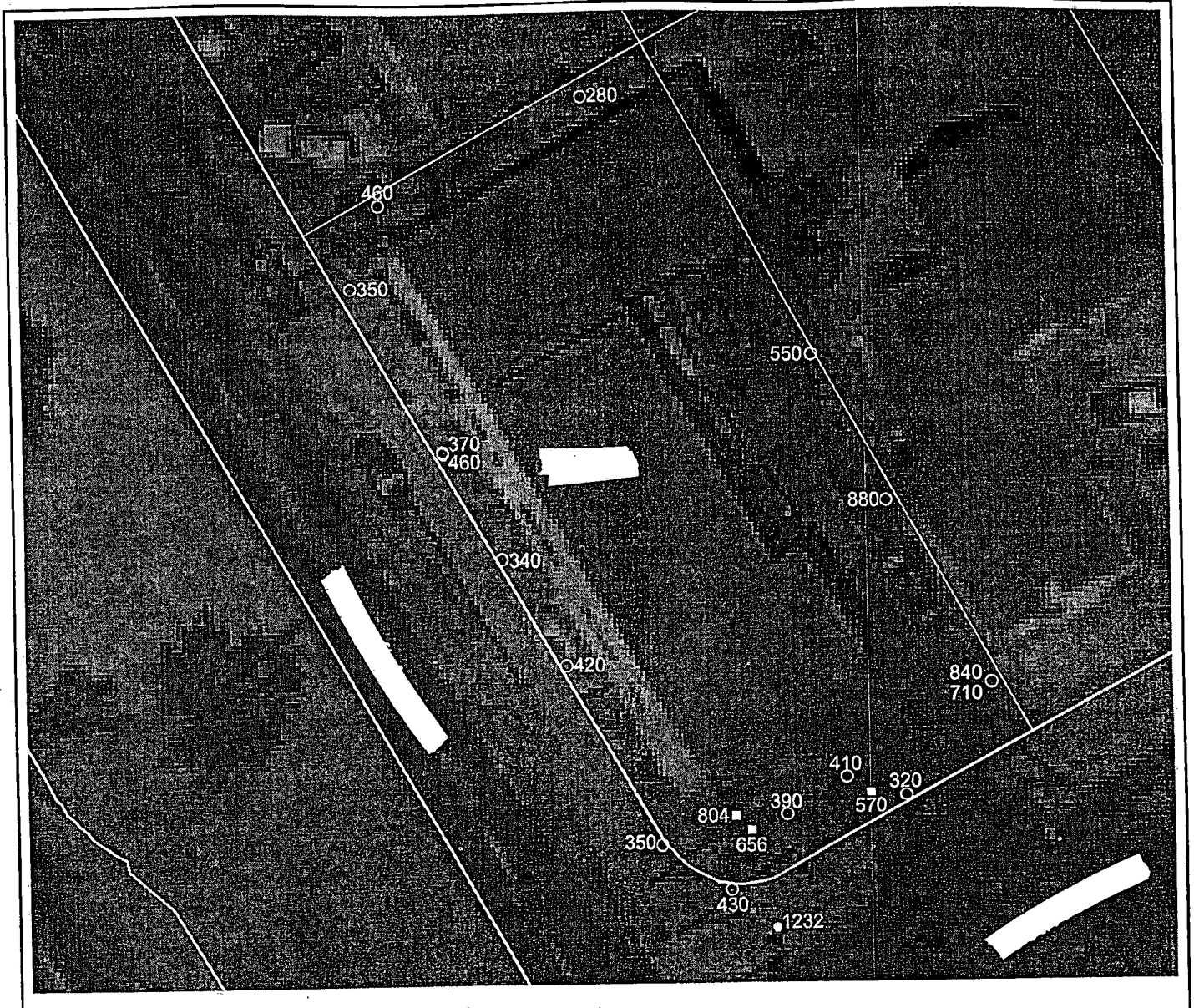
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-032-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples

Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/26/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-033-1

- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

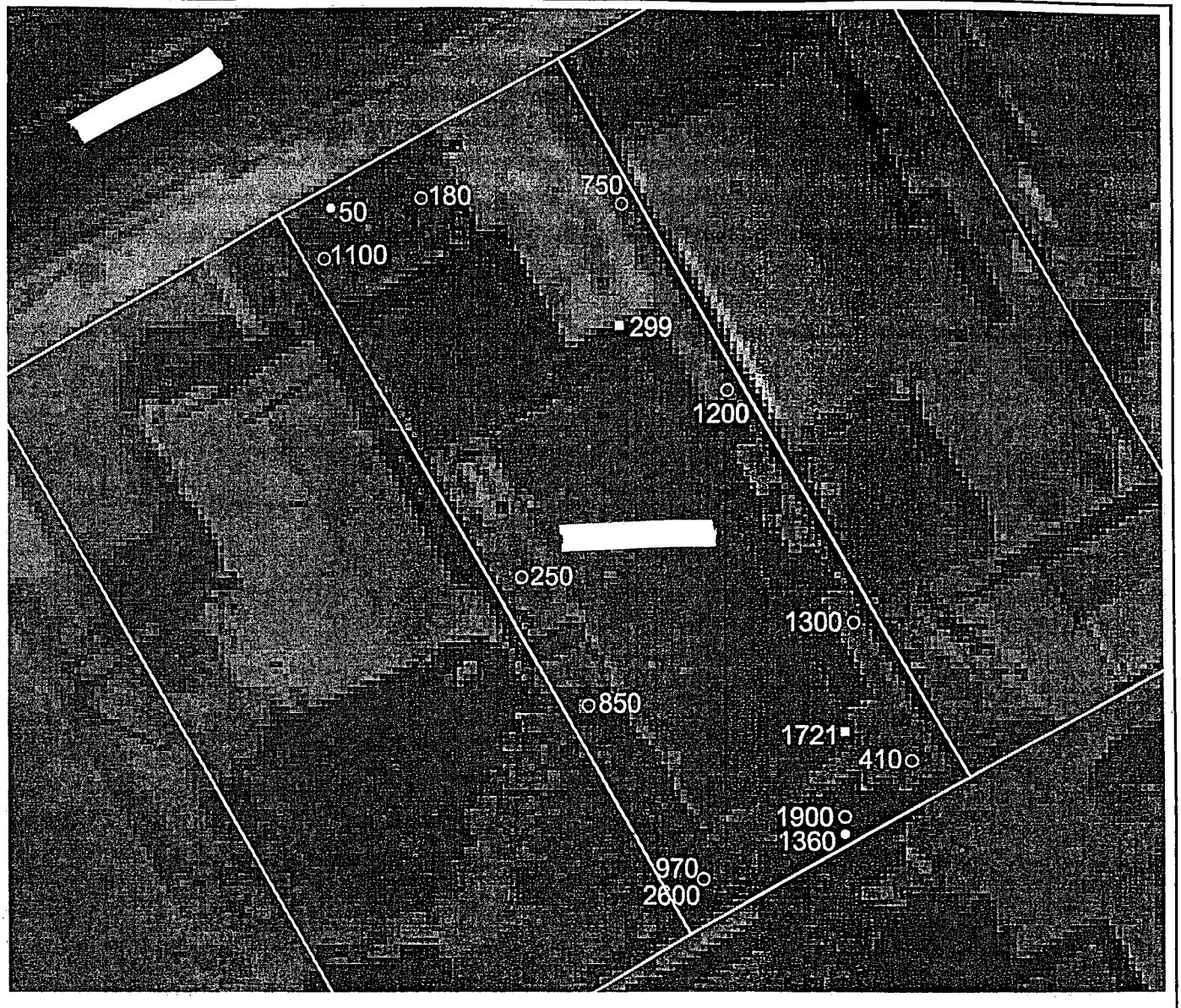
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-034-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples

Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/18/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-034-2

0 10 20 Feet

N

LEGEND

Approximate Area for Proposed Excavation

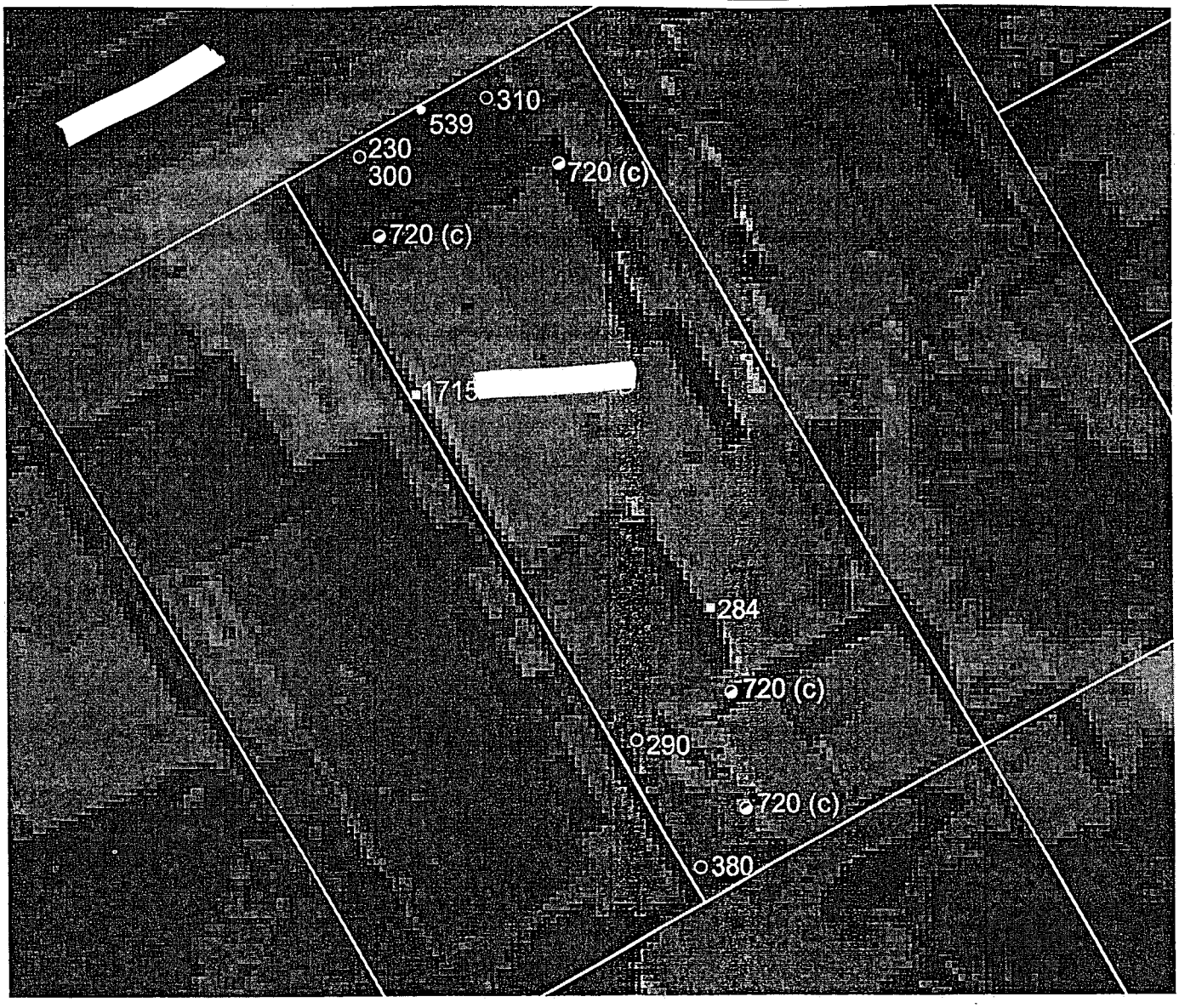
Marked parcel boundaries are approximate

Verdese Carter Park Project
AlliedSignal, Inc.

Proposed Excavation Area for:

PARSONS ENGINEERING SCIENCE, INC.

Figure A-036-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-038-1

- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate
- SI Samples were not collected at this property because access was denied. Analytical results shown were obtained from limited sampling previously conducted by EPA.

0 20 40 60 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999 (C) C denotes composite lead concentration of combined dripline samples

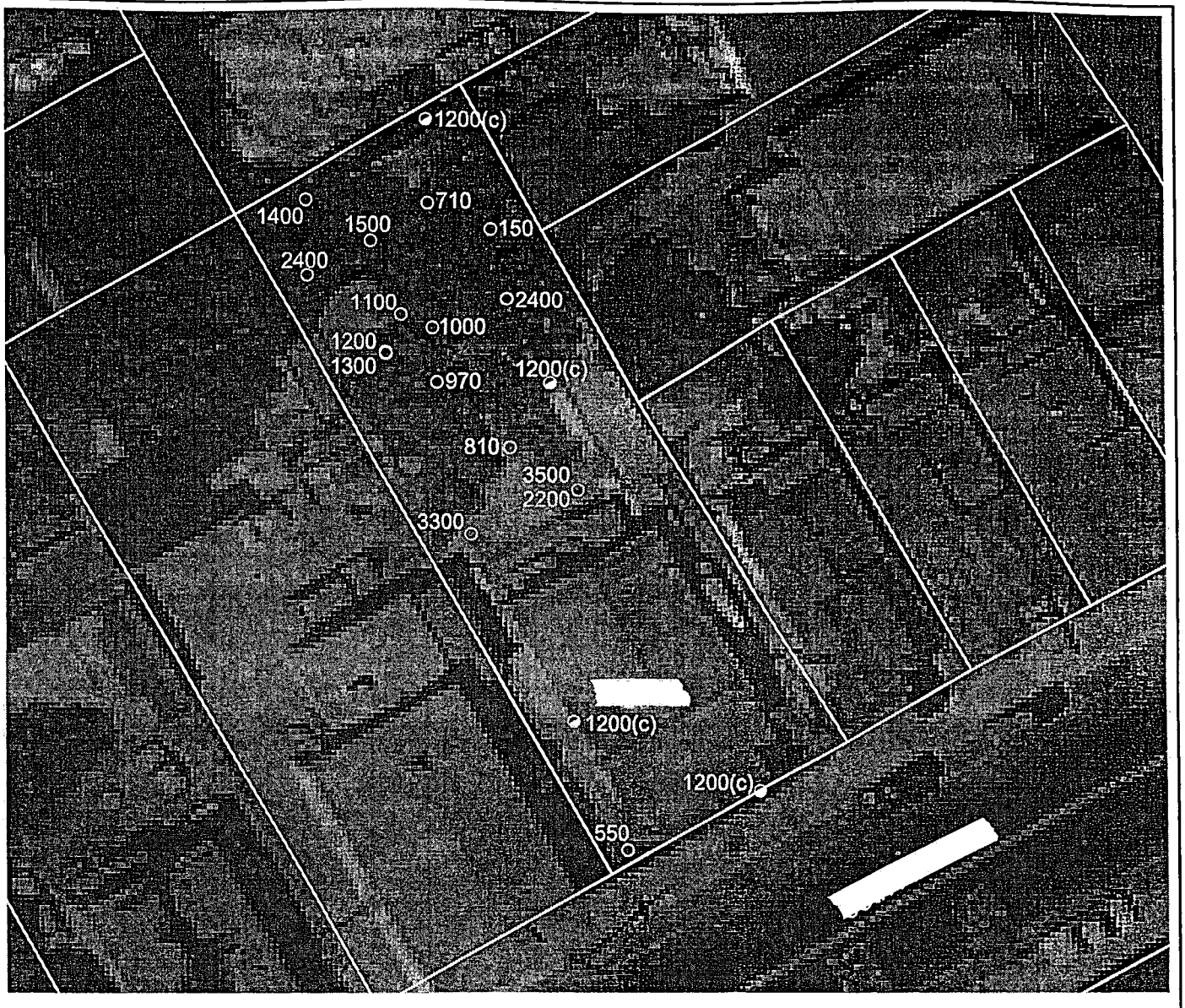
Verdese Carter Park Project AlliedSignal, Inc.

Surface Soil Sample Results

09/11/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-039-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

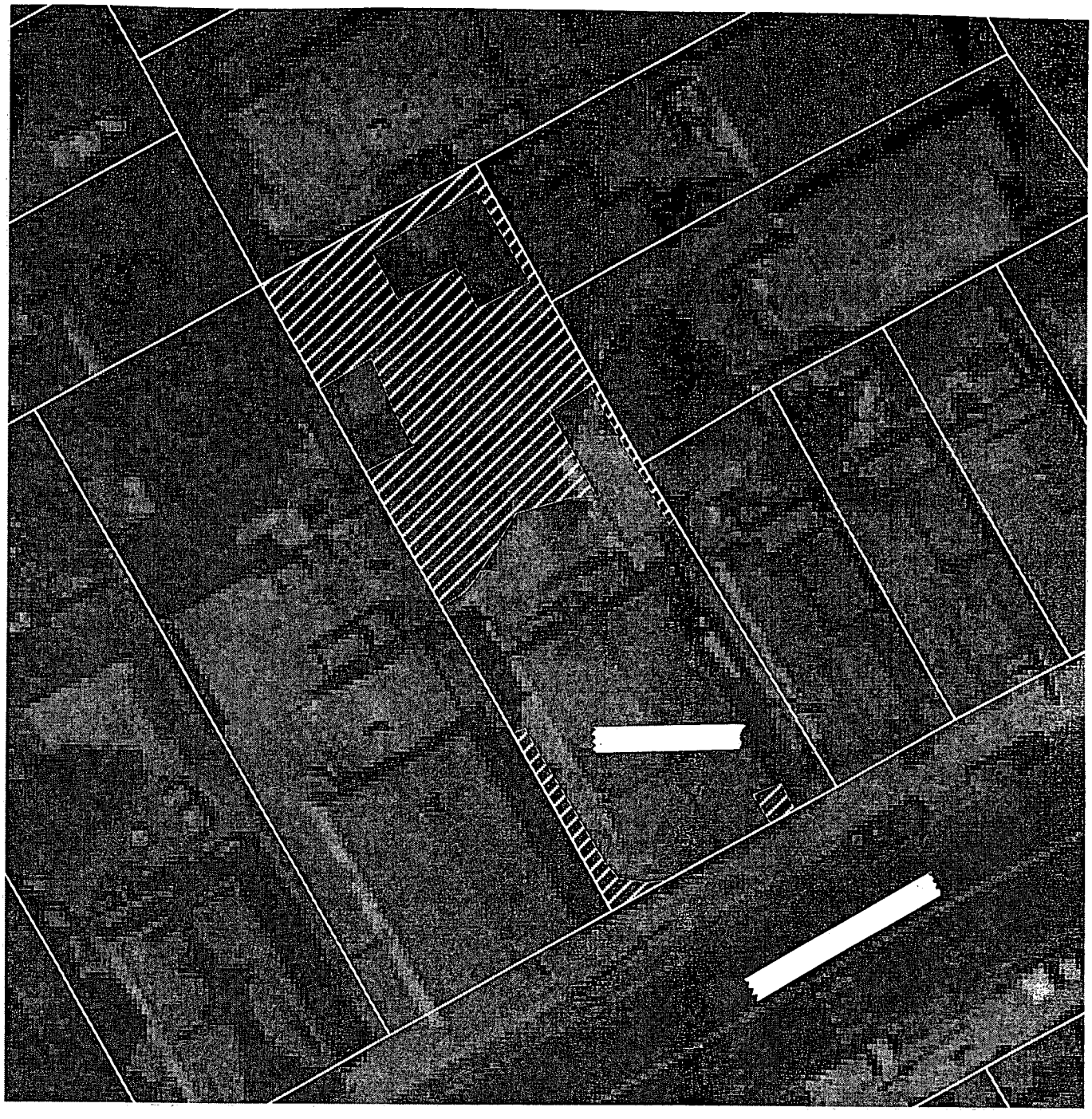
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/18/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-039-2



0 10 20 Feet

N

LEGEND

Approximate Area for Proposed Excavation

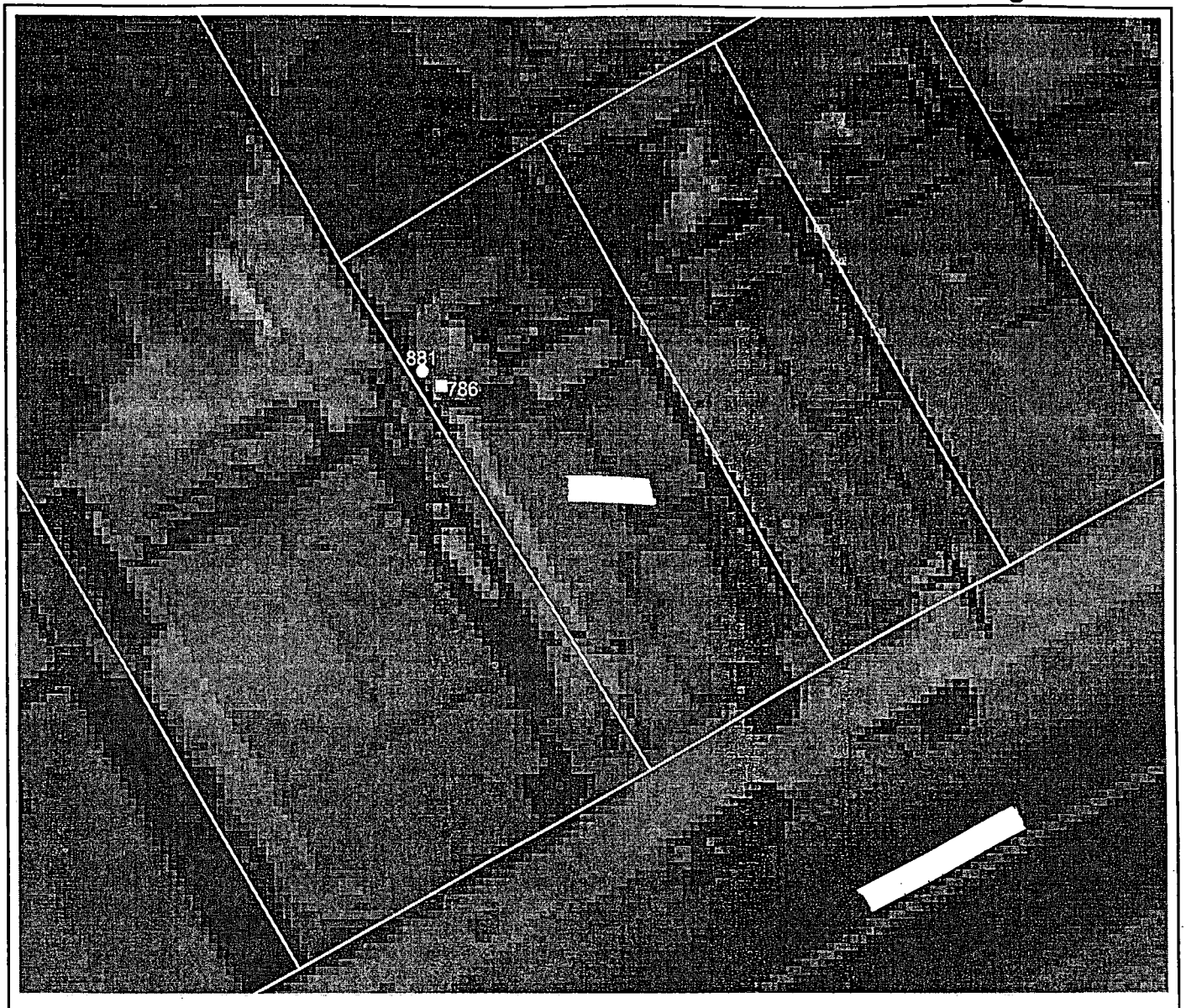
Marked parcel boundaries are approximate.

Verdese Carter Park Project
AlliedSignal, Inc.

Proposed Excavation Area for:

PARSONS ENGINEERING SCIENCE, INC.

Figure A-040-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

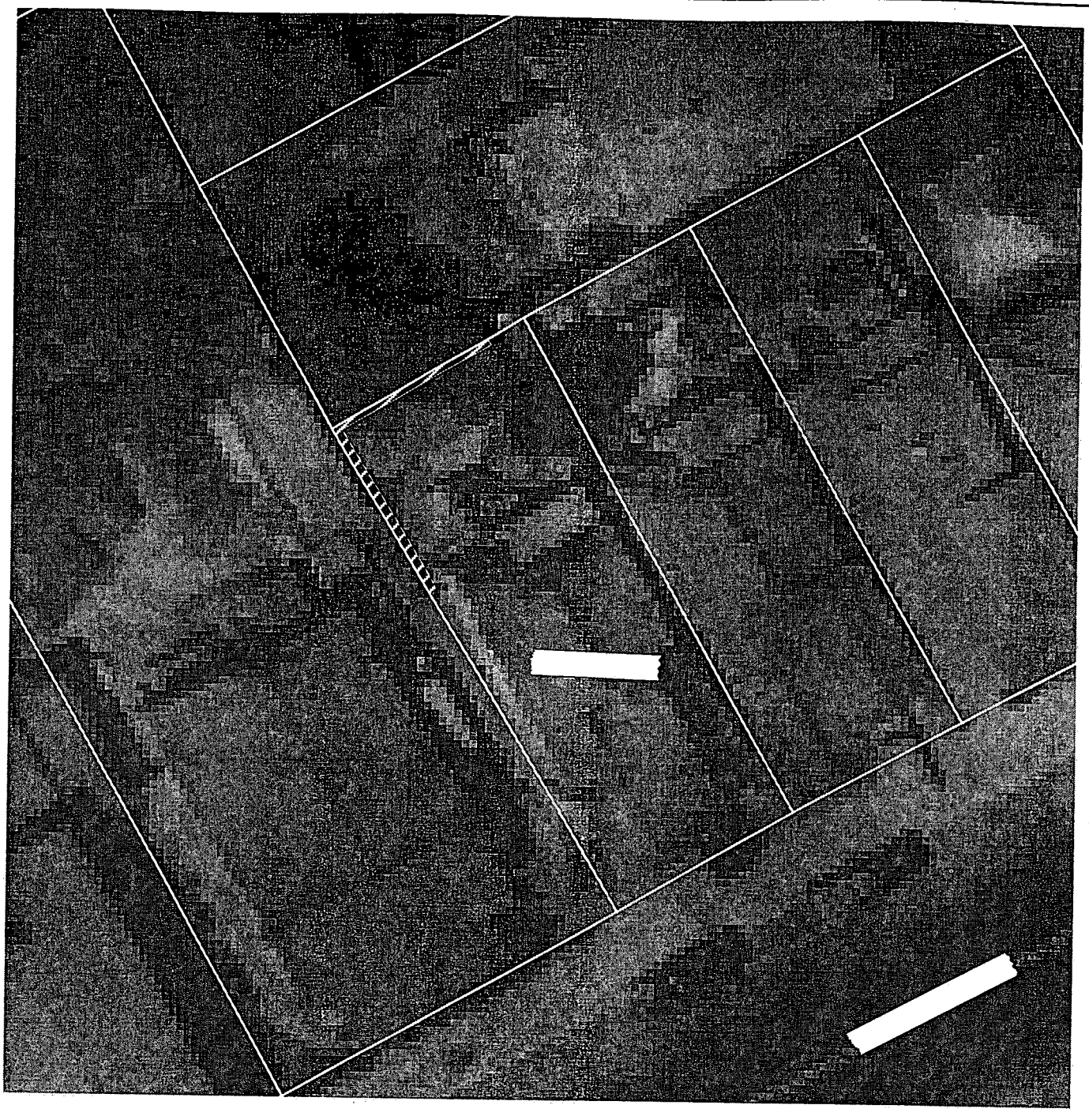
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

09/29/99

PARSONS ENGINEERING SCIENCE, INC.

Figure A-040-2



0 10 20 Feet

N

LEGEND

Approximate Area for Proposed Excavation

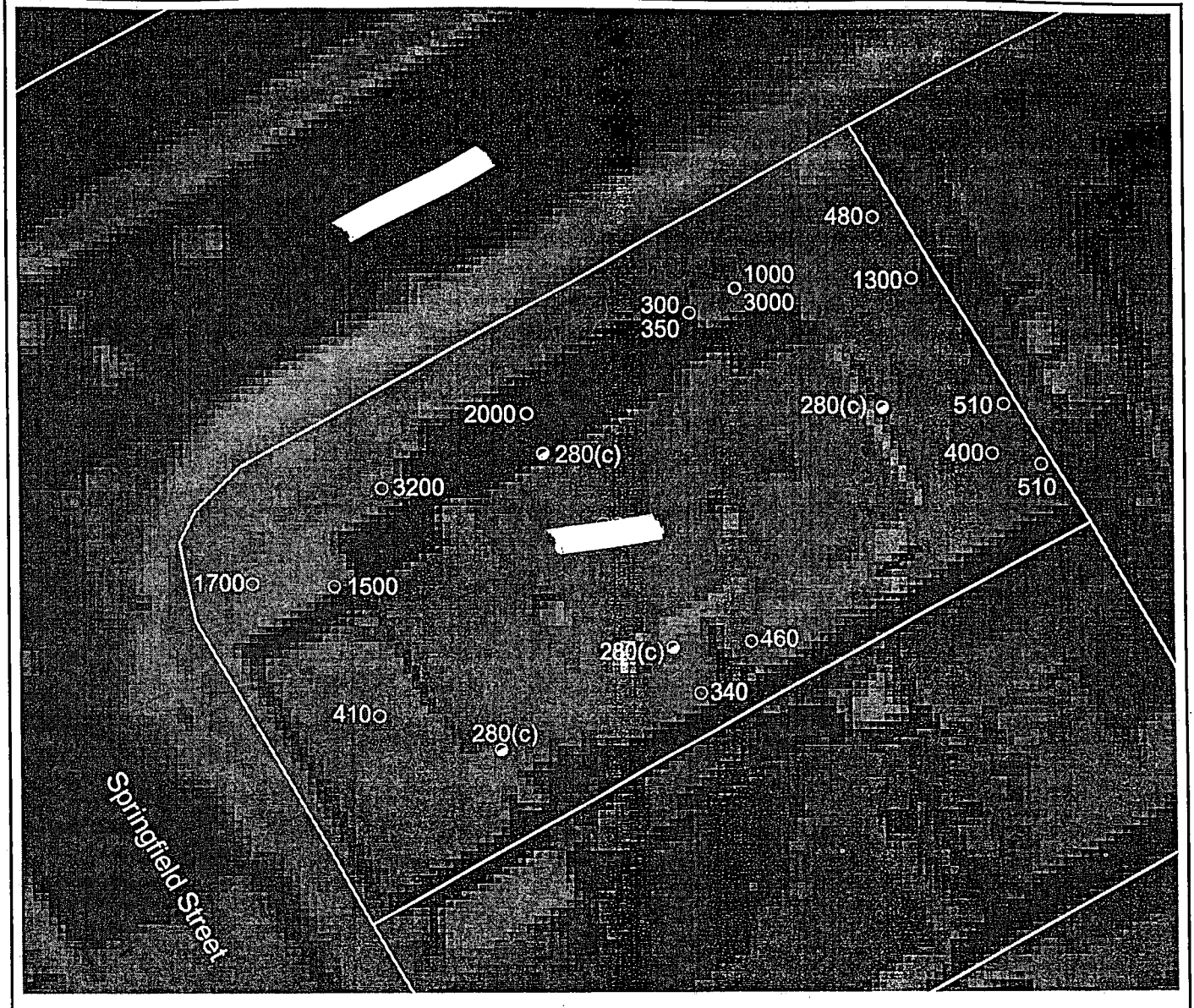
Marked parcel boundaries are approximate

Verdese Carter Park Project
AlliedSignal, Inc.

Proposed Excavation Area for:

PARSONS ENGINEERING SCIENCE, INC.

Figure A-041-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 10 20 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

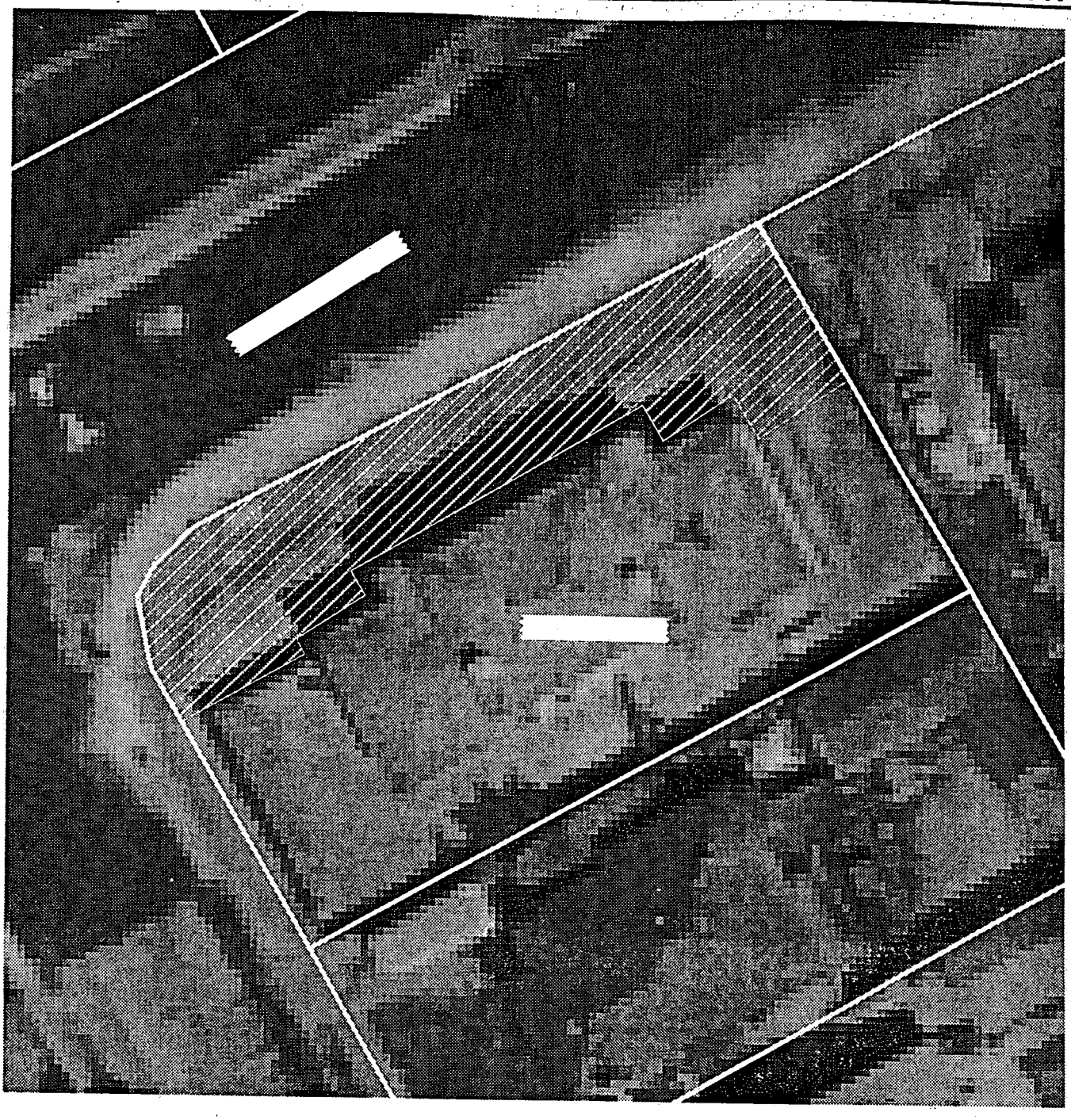
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/26/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-041-2



0 10 20 Feet

N

LEGEND

Approximate Area for Proposed Excavation

Marked parcel boundaries are approximate.

Verdese Carter Park Project
AlliedSignal, Inc.

Proposed Excavation Area for:

PARSONS ENGINEERING SCIENCE, INC.

Figure A-043-1

- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 30 60 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

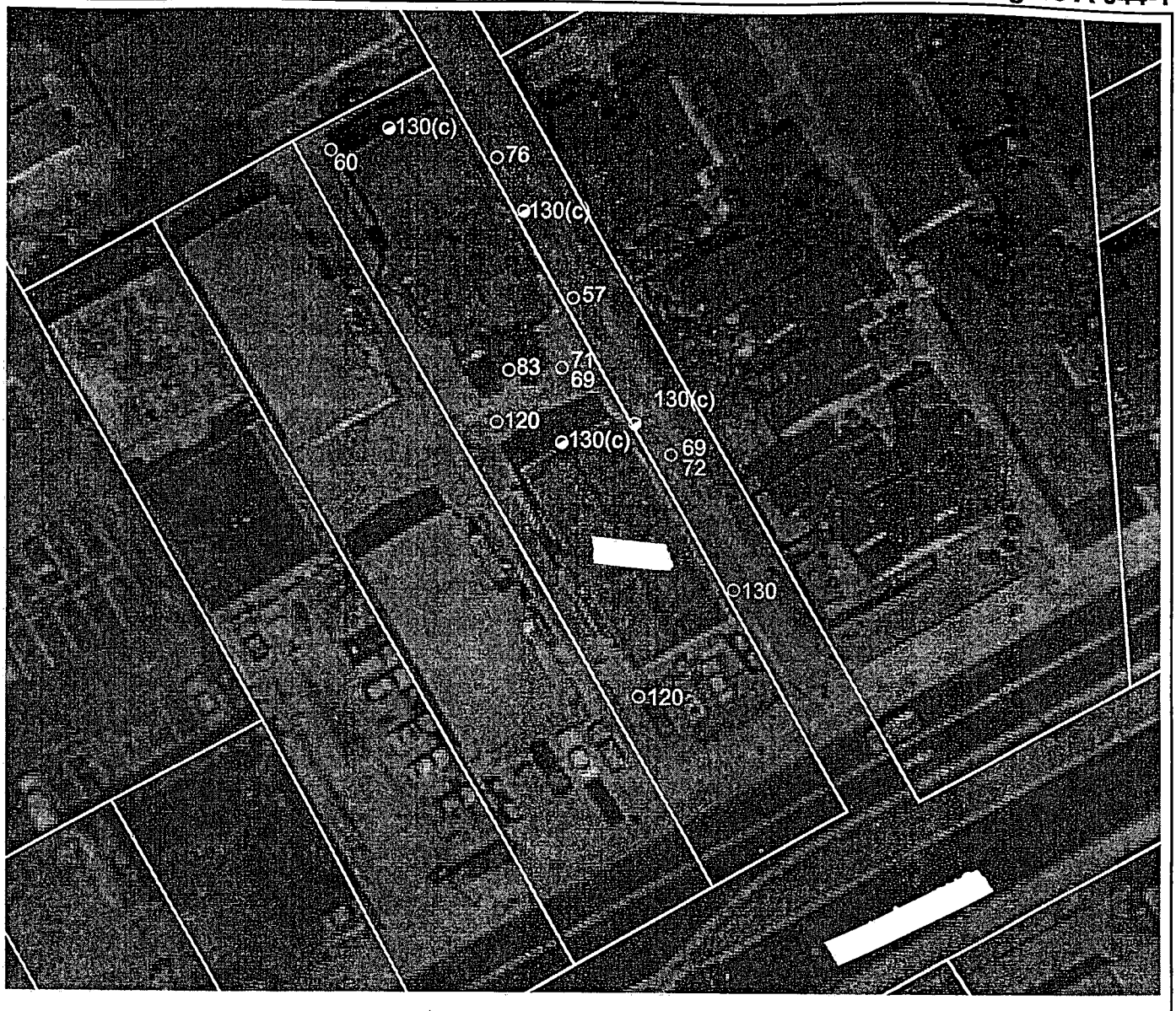
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-044-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 30 60 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples

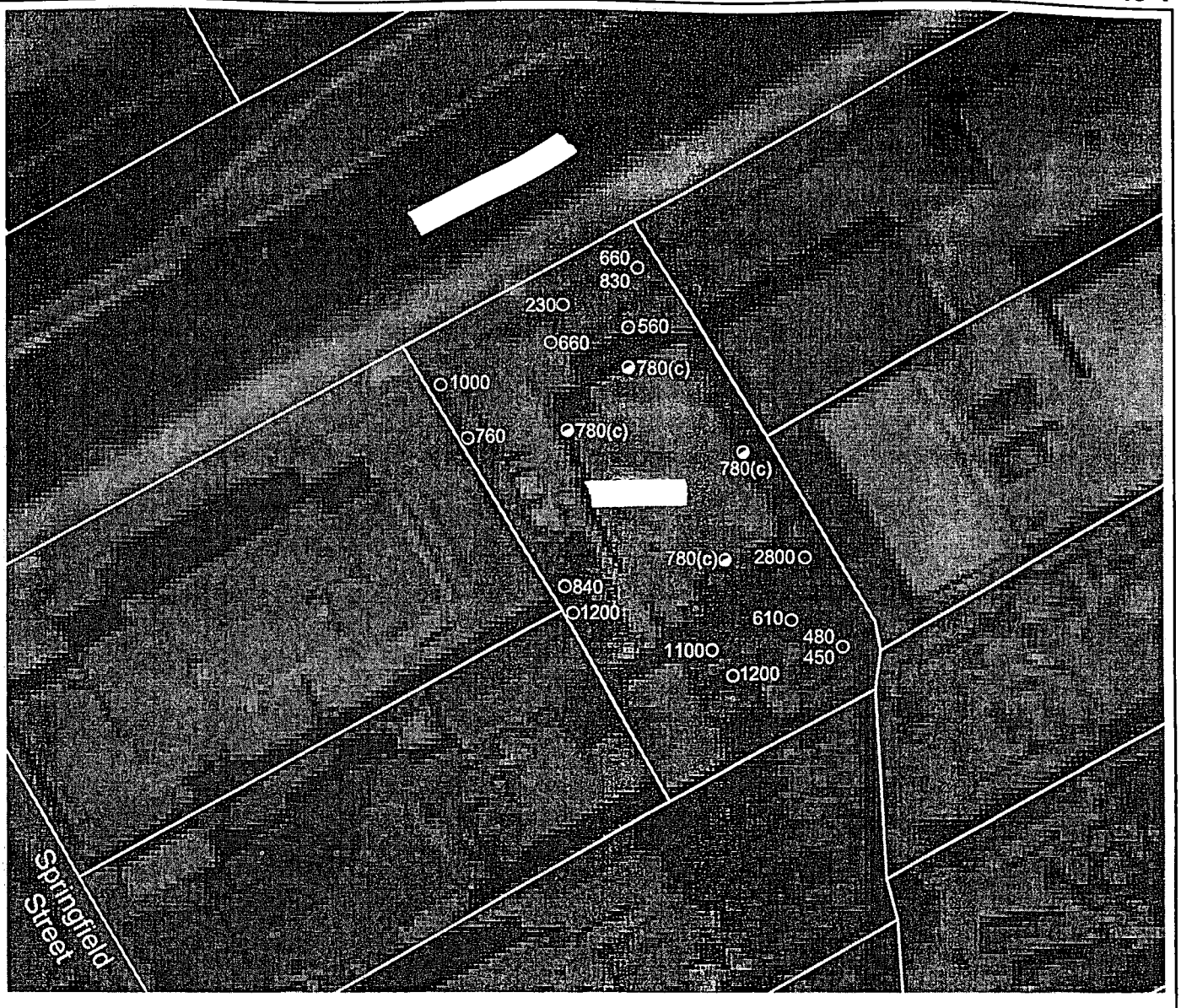
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-045-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample
- 9999 Lead Concentration in mg/Kg
- 9999(c) 'C' denotes composite lead concentration of combined dripline samples.

Verdese Carter Park Project AlliedSignal, Inc.

Surface Soil Sample Results

01/18/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-045-2

0 10 20 Feet

N

LEGEND

Approximate Area for Proposed Excavation

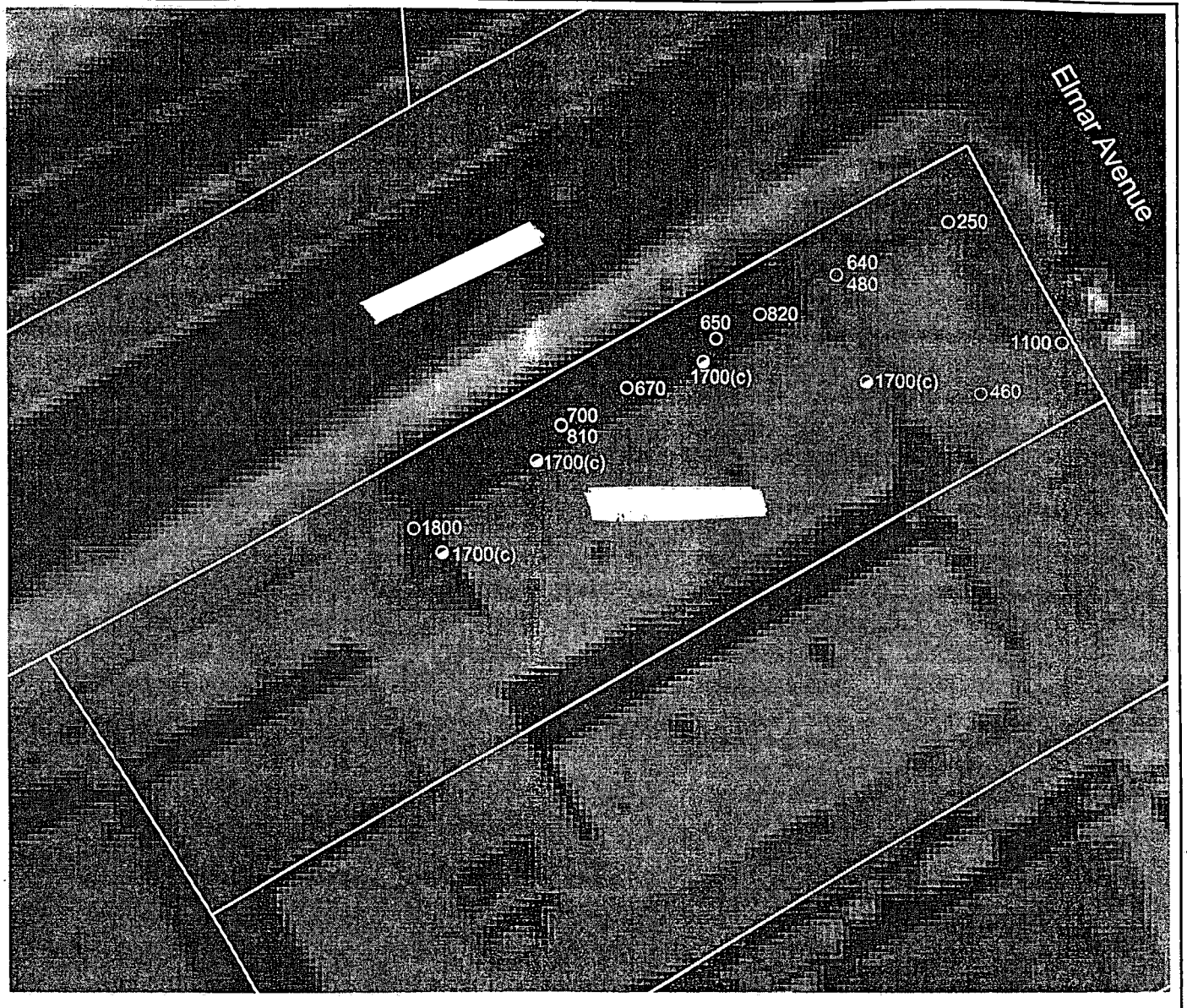
Marked parcel boundaries are approximate.

Verdese Carter Park Project
AlliedSignal, Inc.

Proposed Excavation Area for:

PARSONS ENGINEERING SCIENCE, INC.

Figure A-046-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

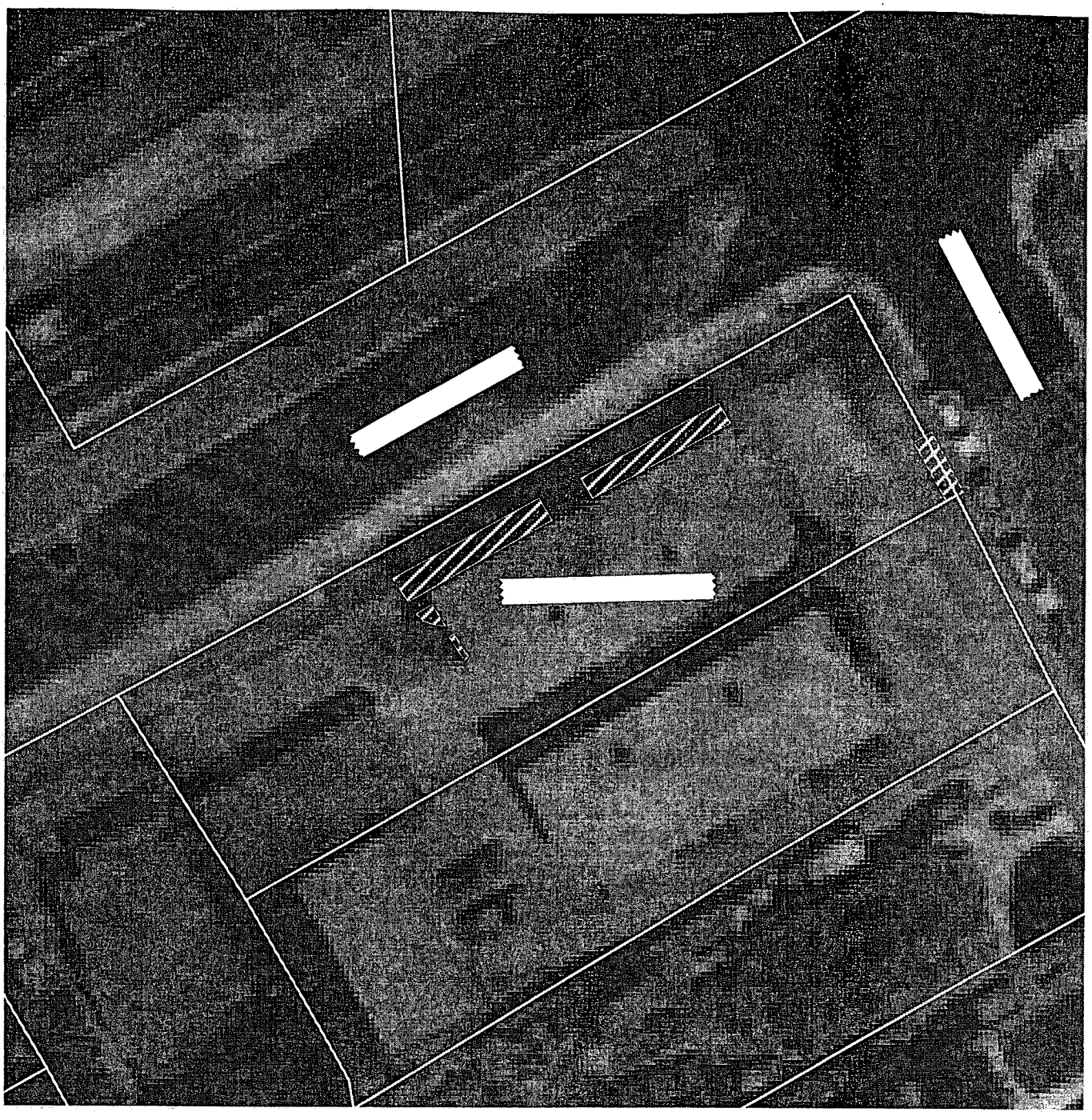
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/18/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-046-2



0 10 20 Feet

N

LEGEND

Approximate Area for Proposed Excavation

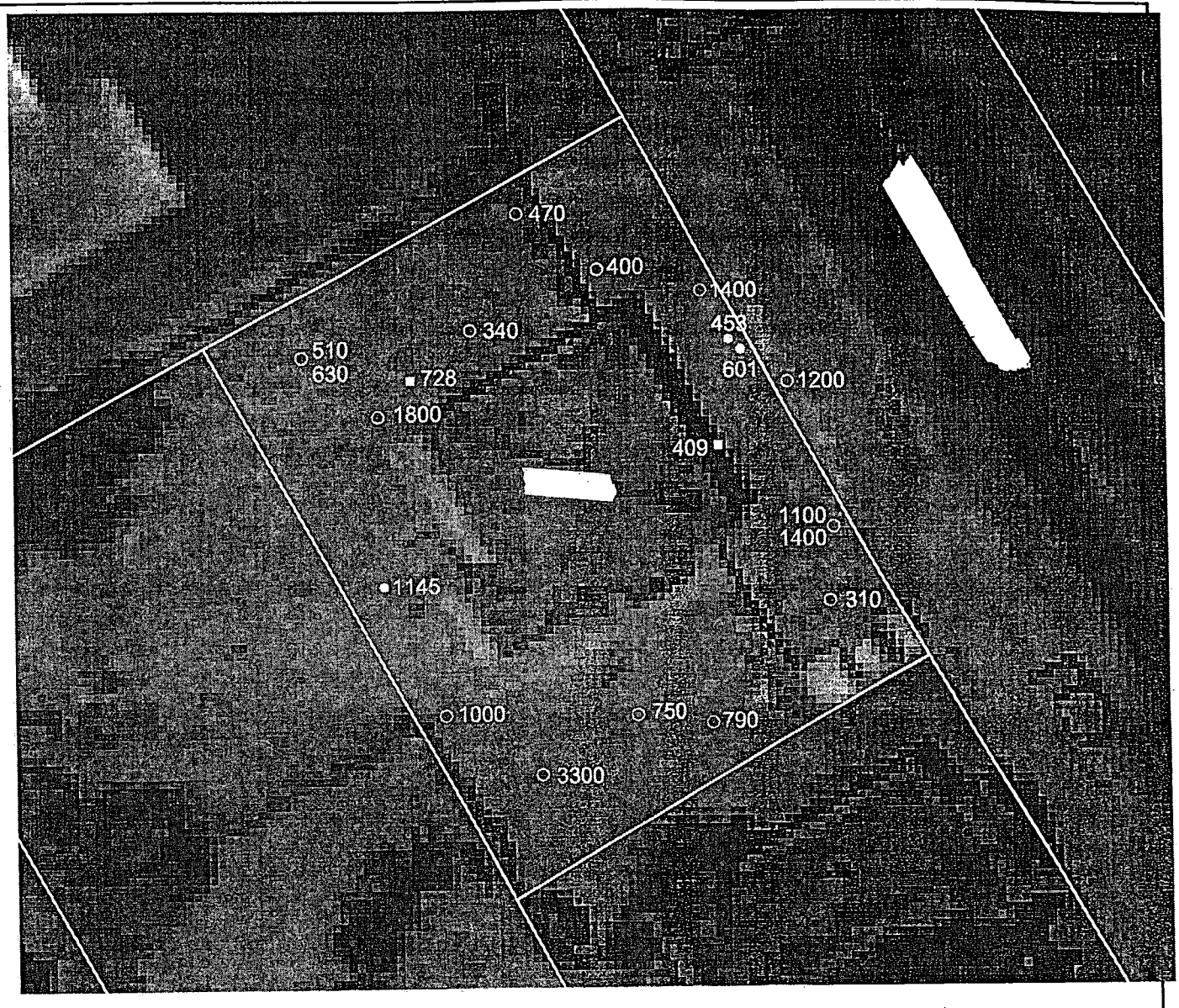
Marked parcel boundaries are approximate

Verdese Carter Park Project
AlliedSignal, Inc.

Proposed Excavation Area for:

PARSONS ENGINEERING SCIENCE, INC.

Figure A-047-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 10 20 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

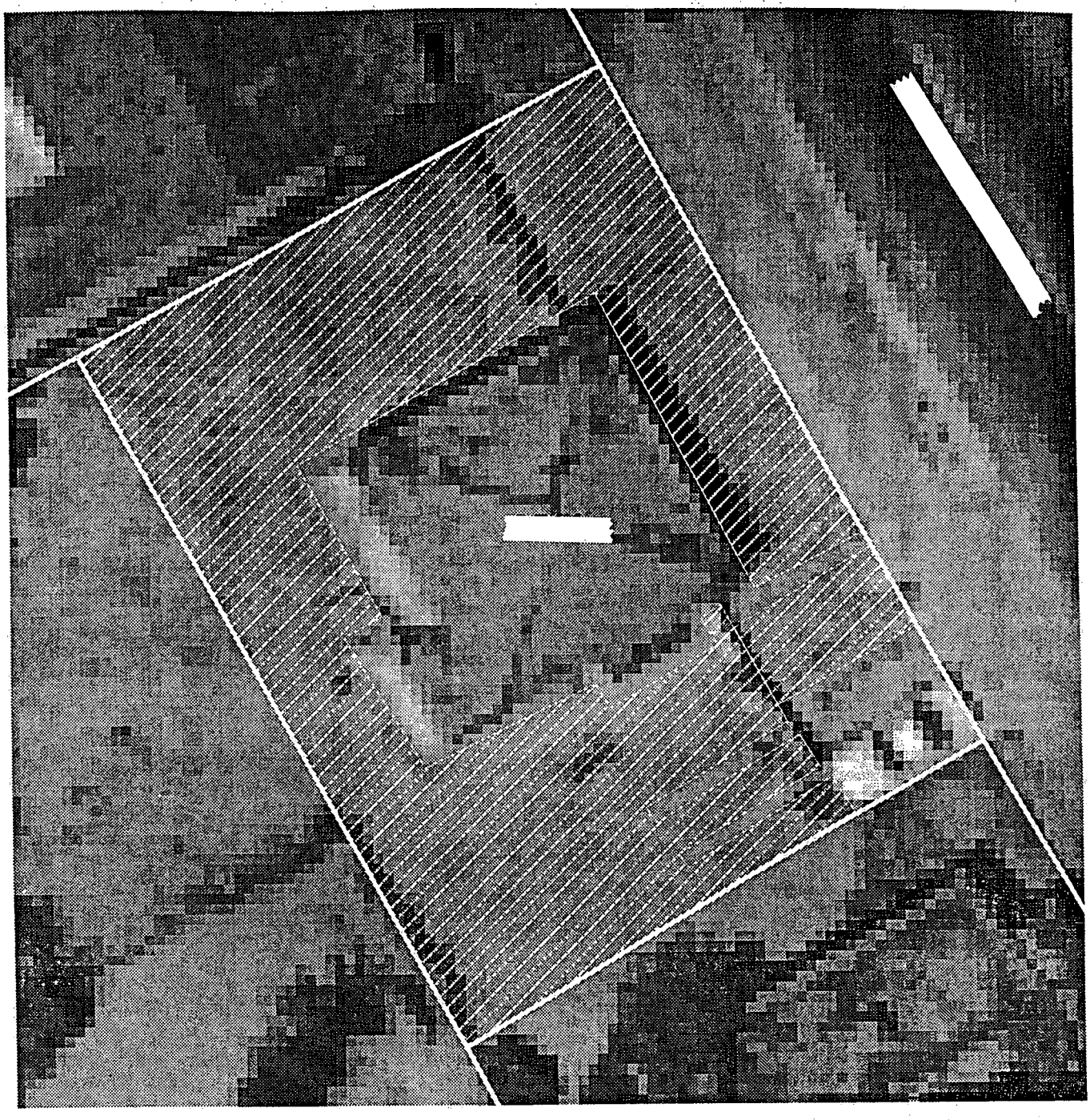
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/19/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-047-2



0 10 20 Feet

N

LEGEND

Approximate Area for Proposed Excavation

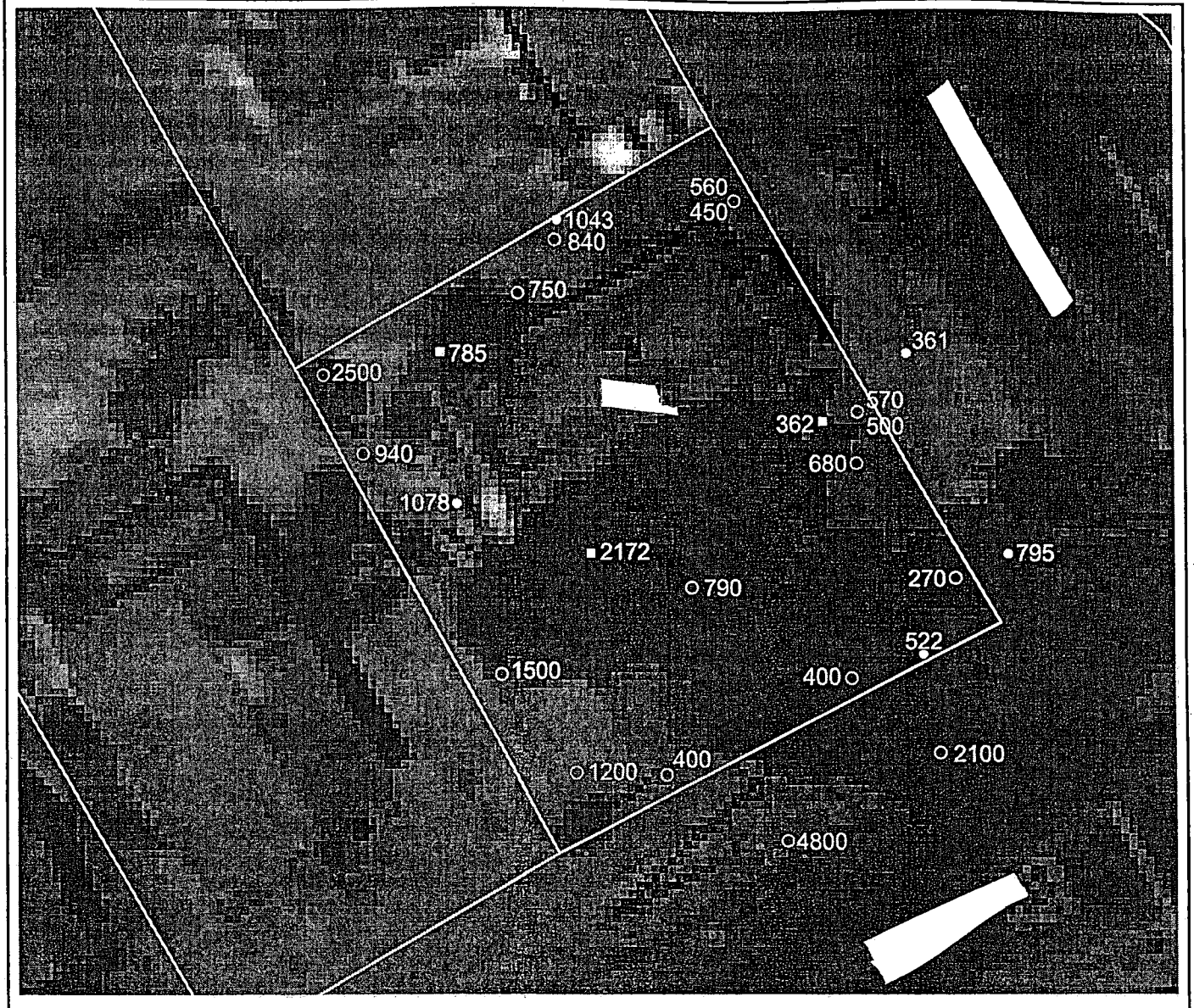
Marked parcel boundaries are approximate.

Verdese Carter Park Project
AlliedSignal, Inc.

Proposed Excavation Area for:

PARSONS ENGINEERING SCIENCE, INC.

Figure A-048-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 10 20 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/19/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-048-2

0 10 20 Feet

N

LEGEND

Approximate Area for Proposed Excavation

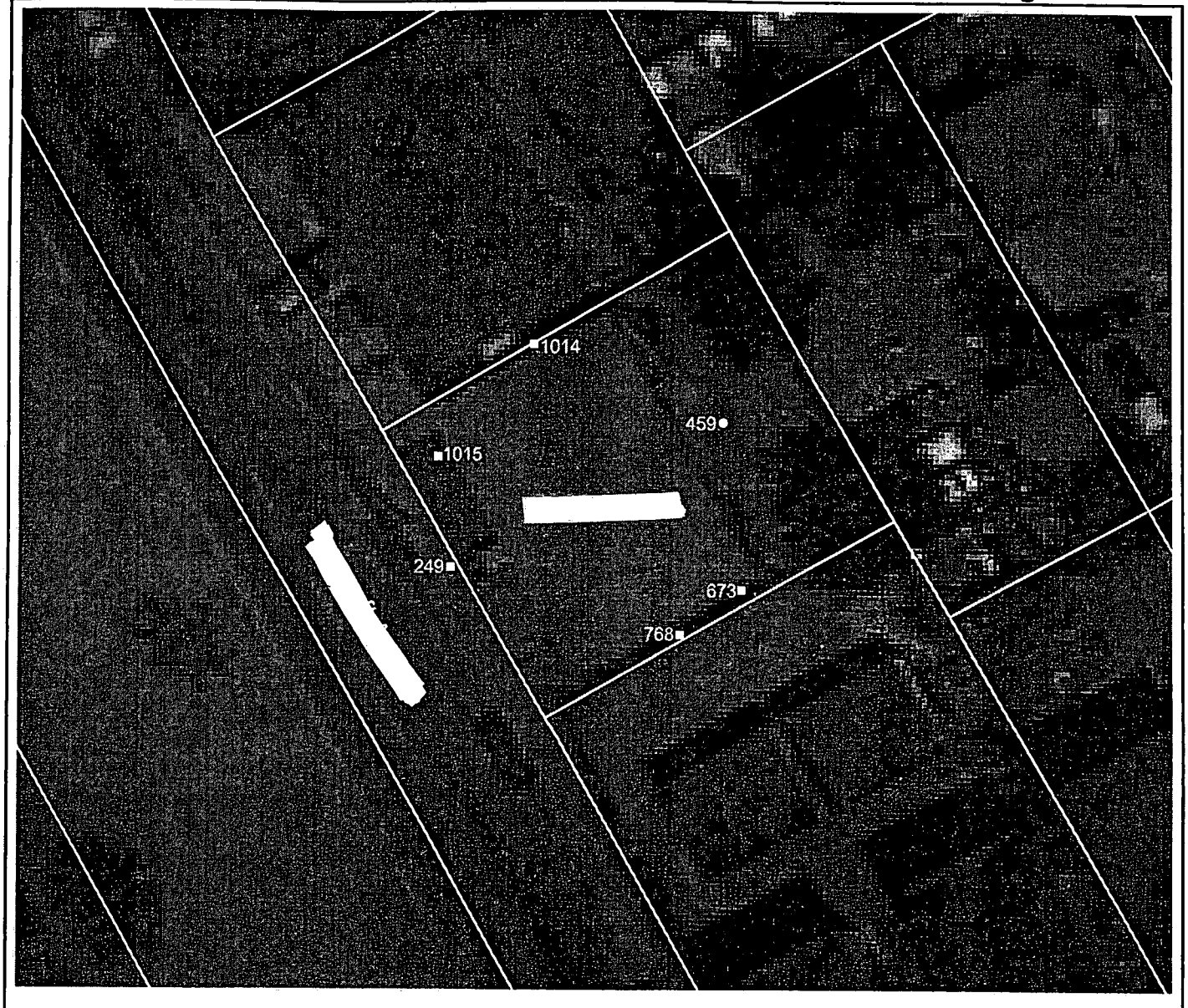
Marked parcel boundaries are approximate.

Verdese Carter Park Project
AlliedSignal, Inc.

Proposed Excavation Area for:

PARSONS ENGINEERING SCIENCE, INC.

Figure A-049-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate
- SI Samples were not collected at this property because access was denied. Analytical results shown were obtained from limited samplling previously conducted by EPA.

0 20 40 60 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(C) C denotes composite lead concentration of combined dripline samples

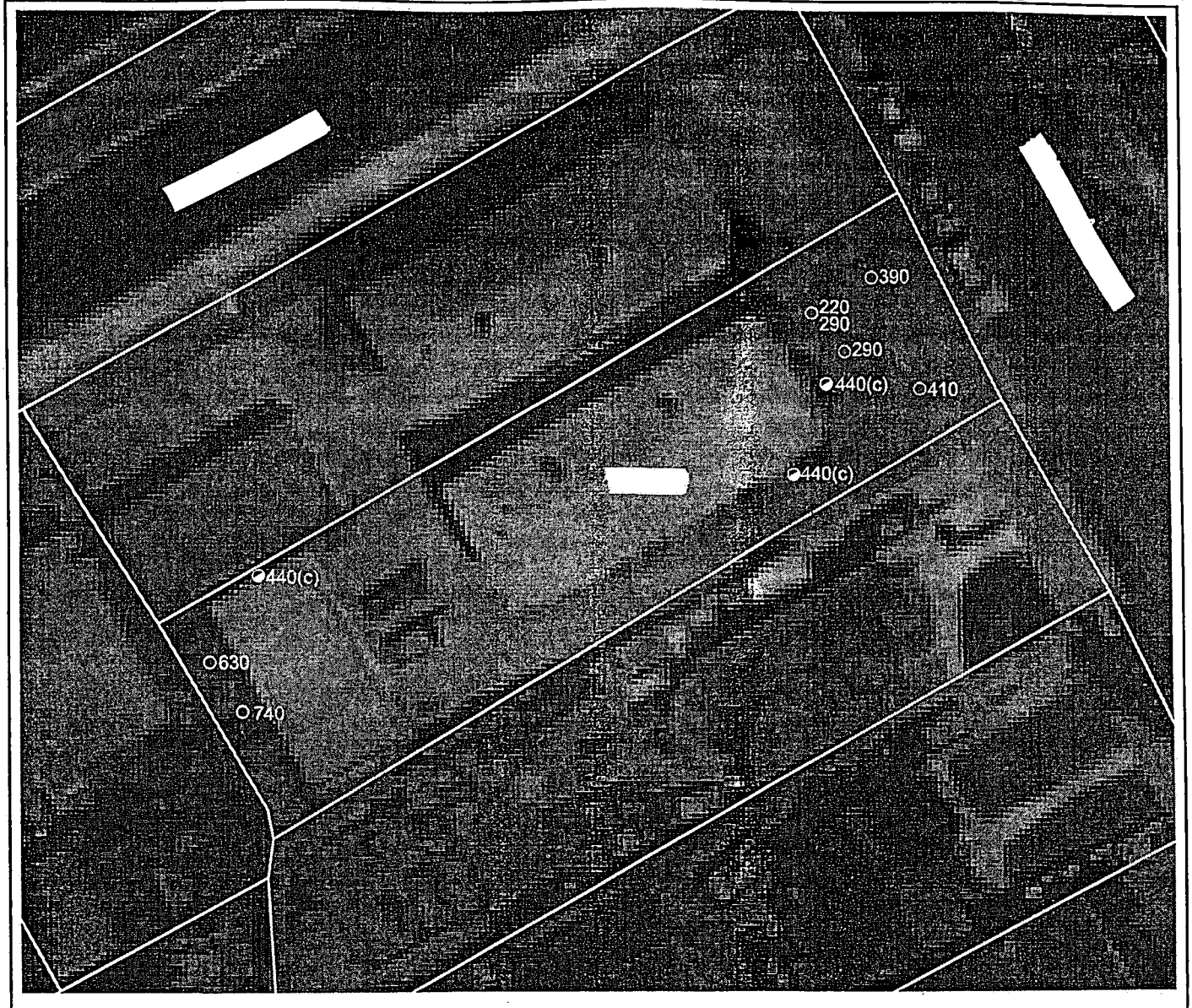
Verdese Carter Park Project AlliedSignal, Inc.

Surface Soil Sample Results

09/11/00

© PARSONS ENGINEERING SCIENCE, INC.

Figure A-050-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

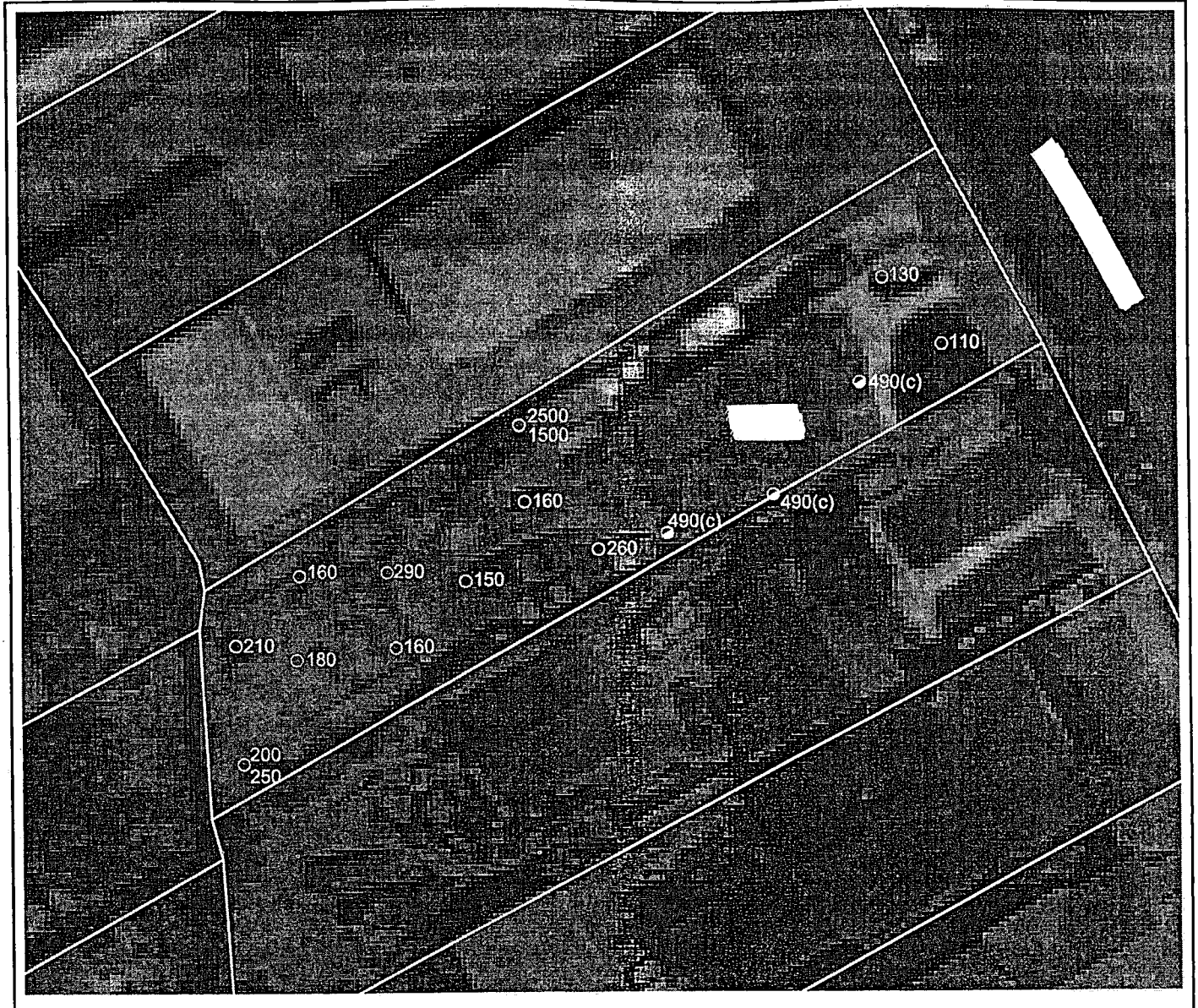
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-051-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

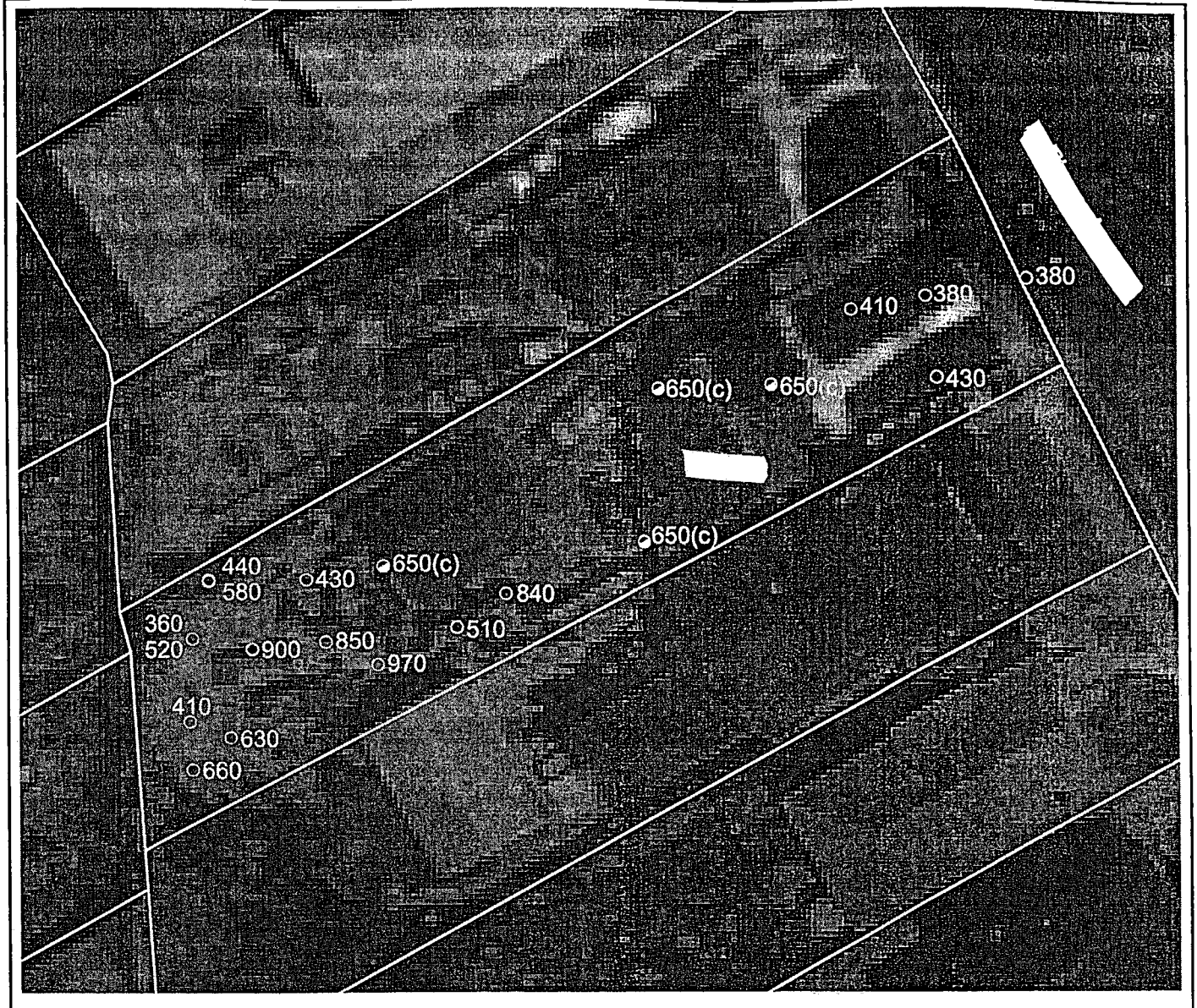
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-052-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples

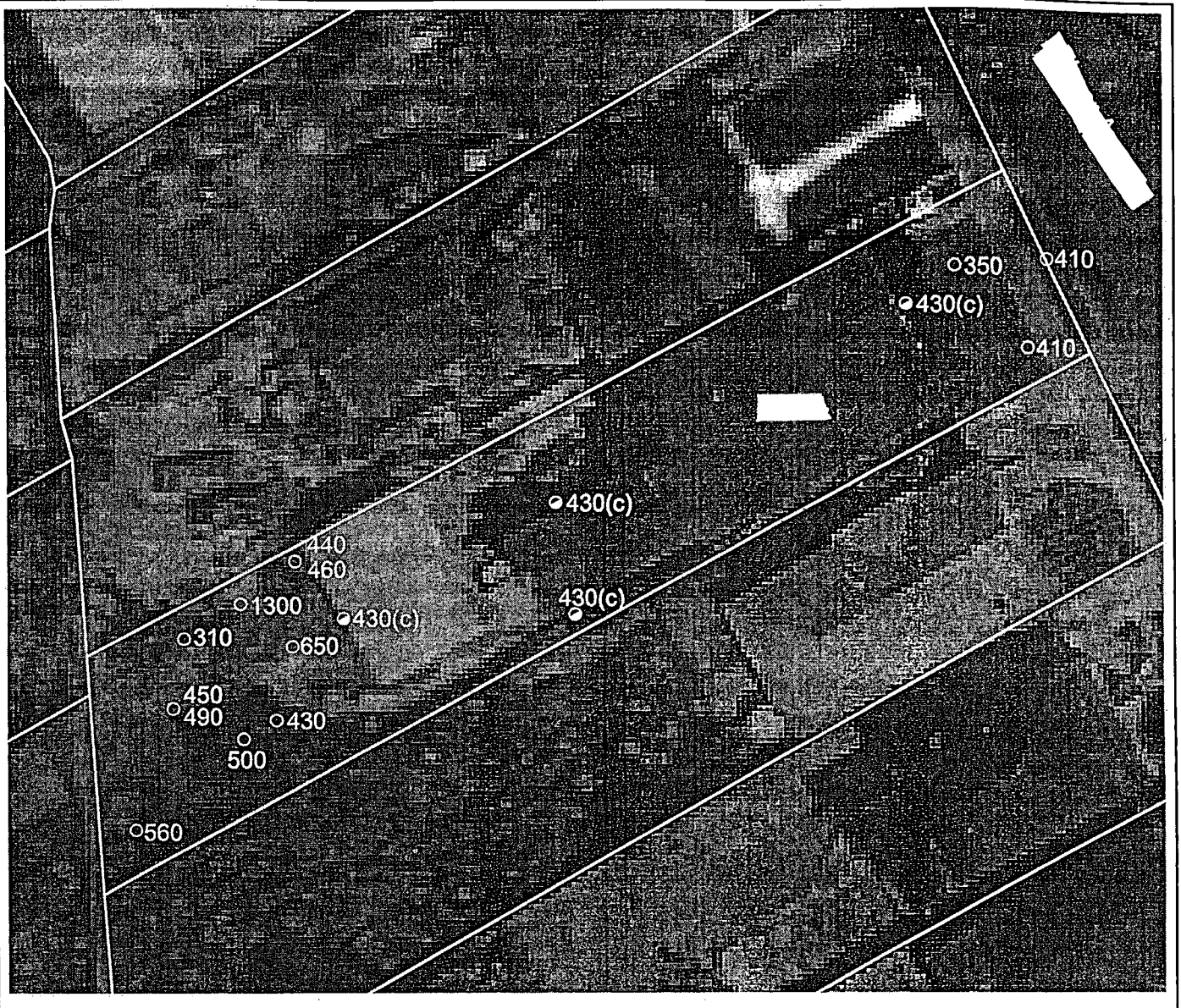
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-053-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

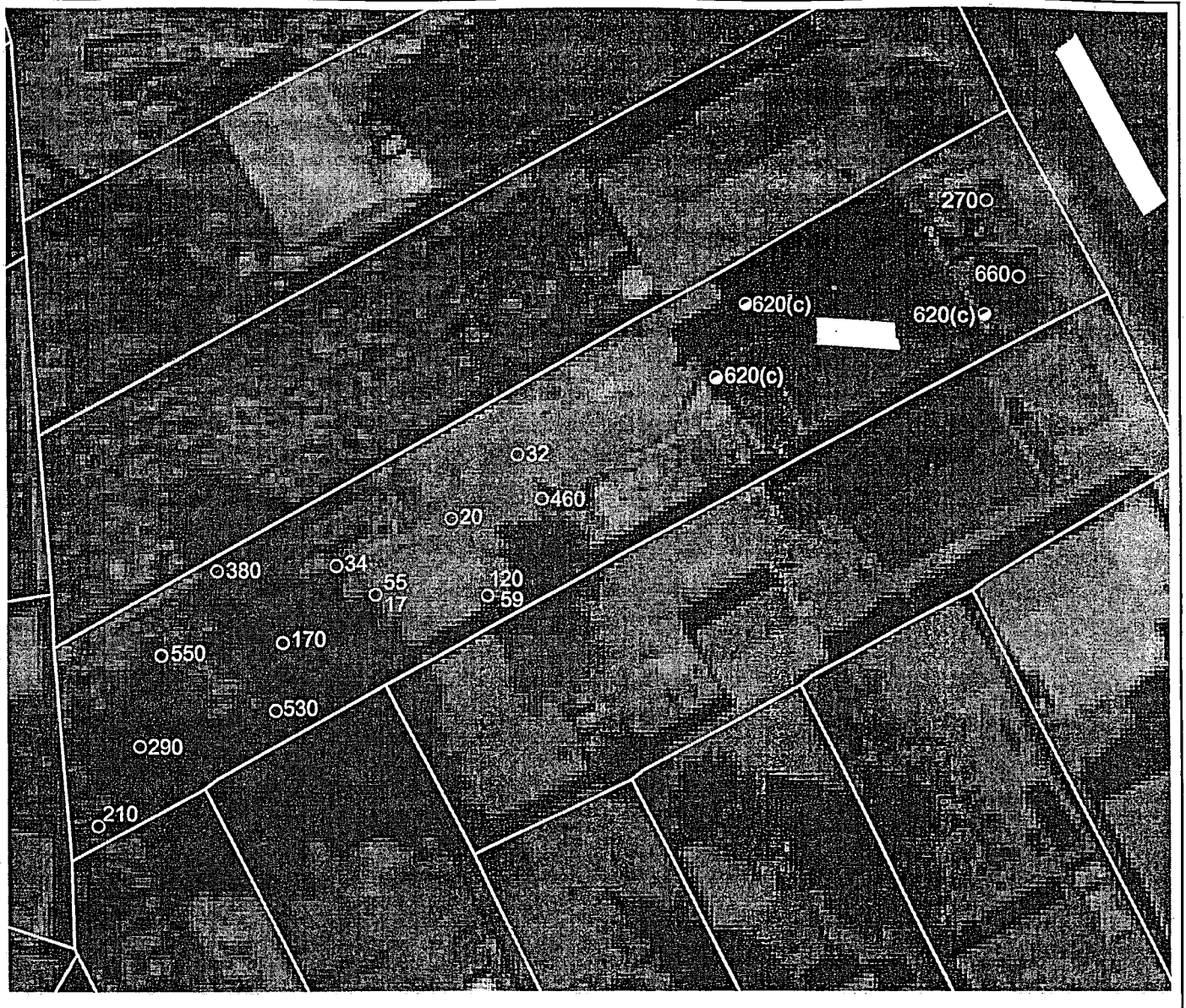
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-055-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

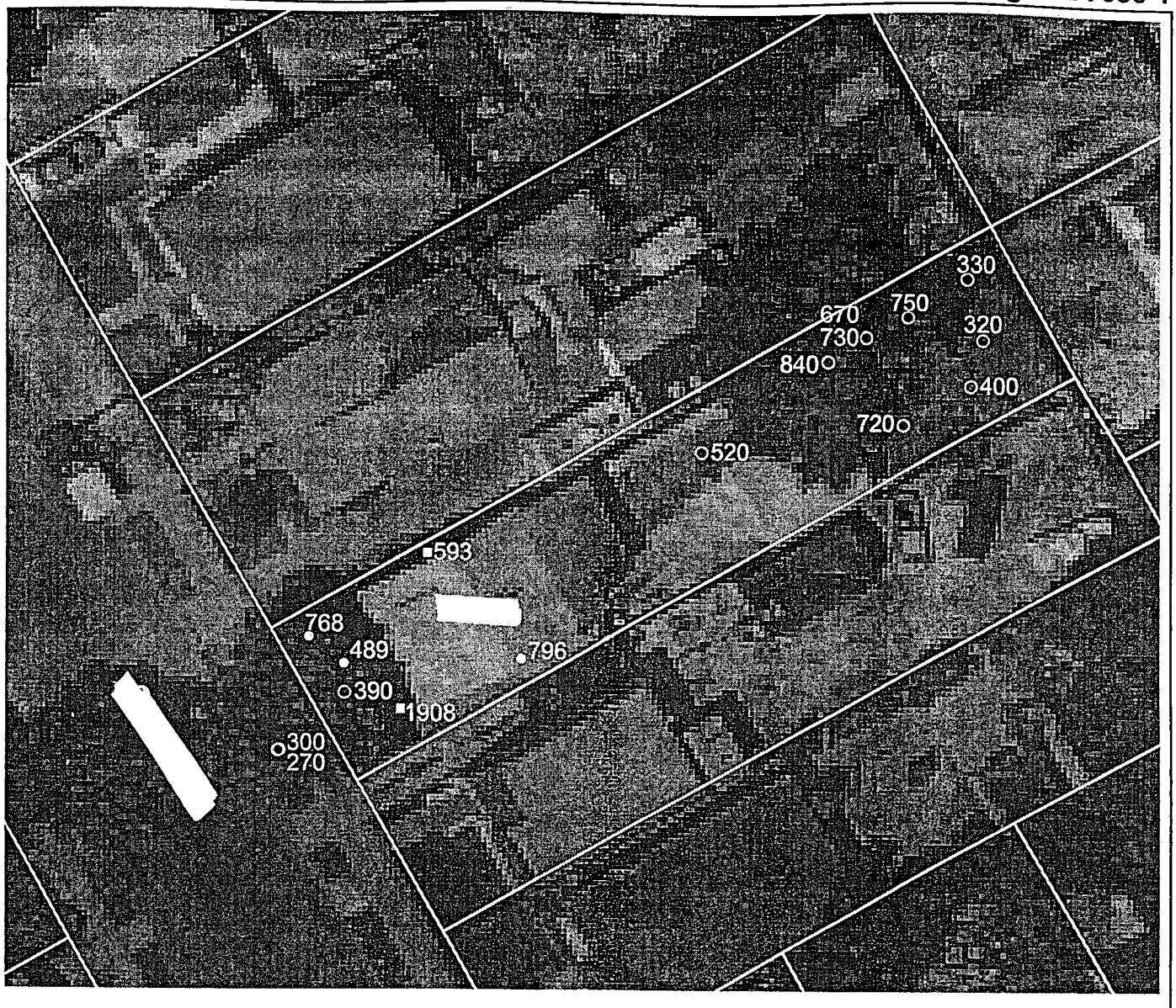
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-056-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

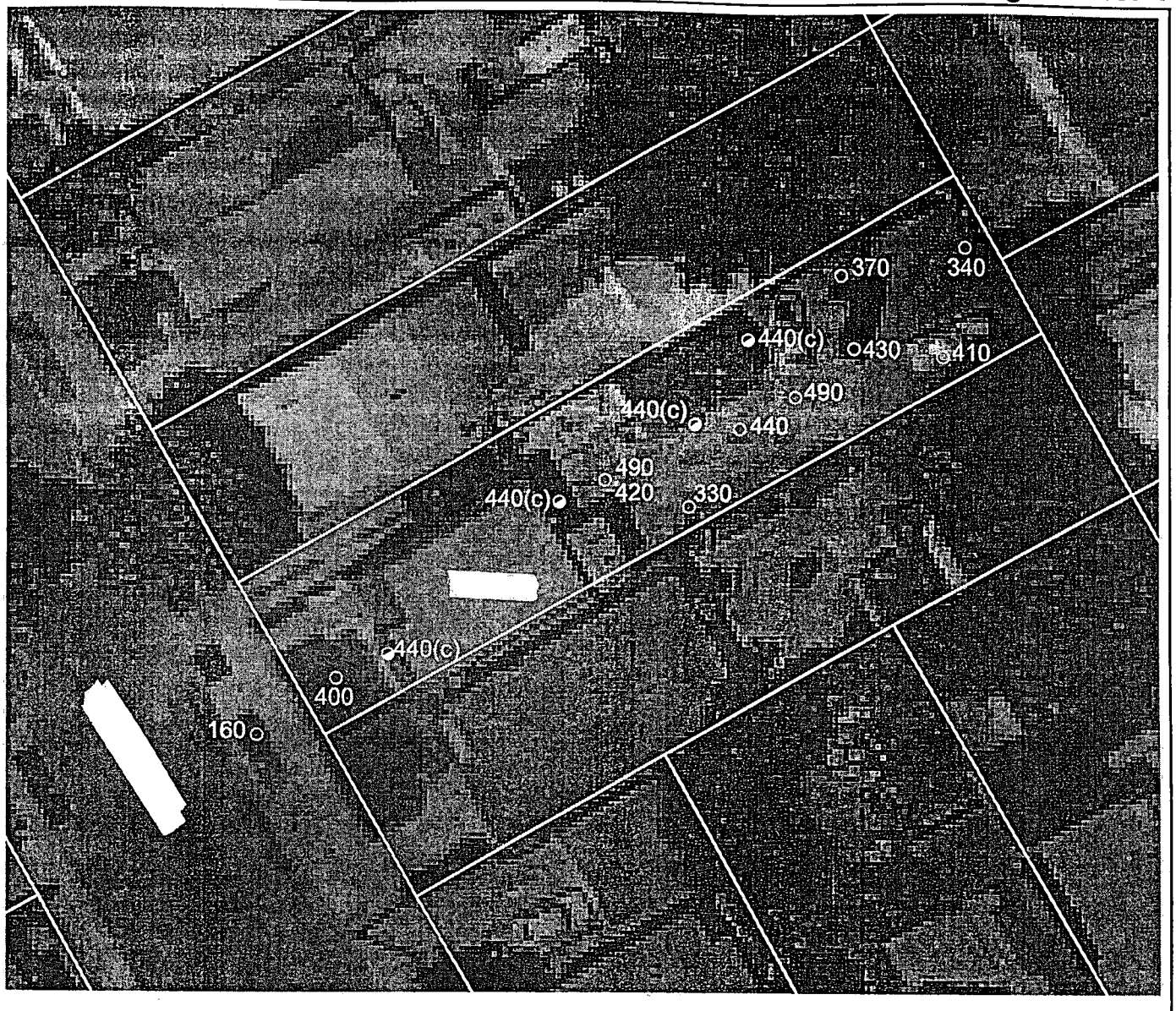
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-057-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

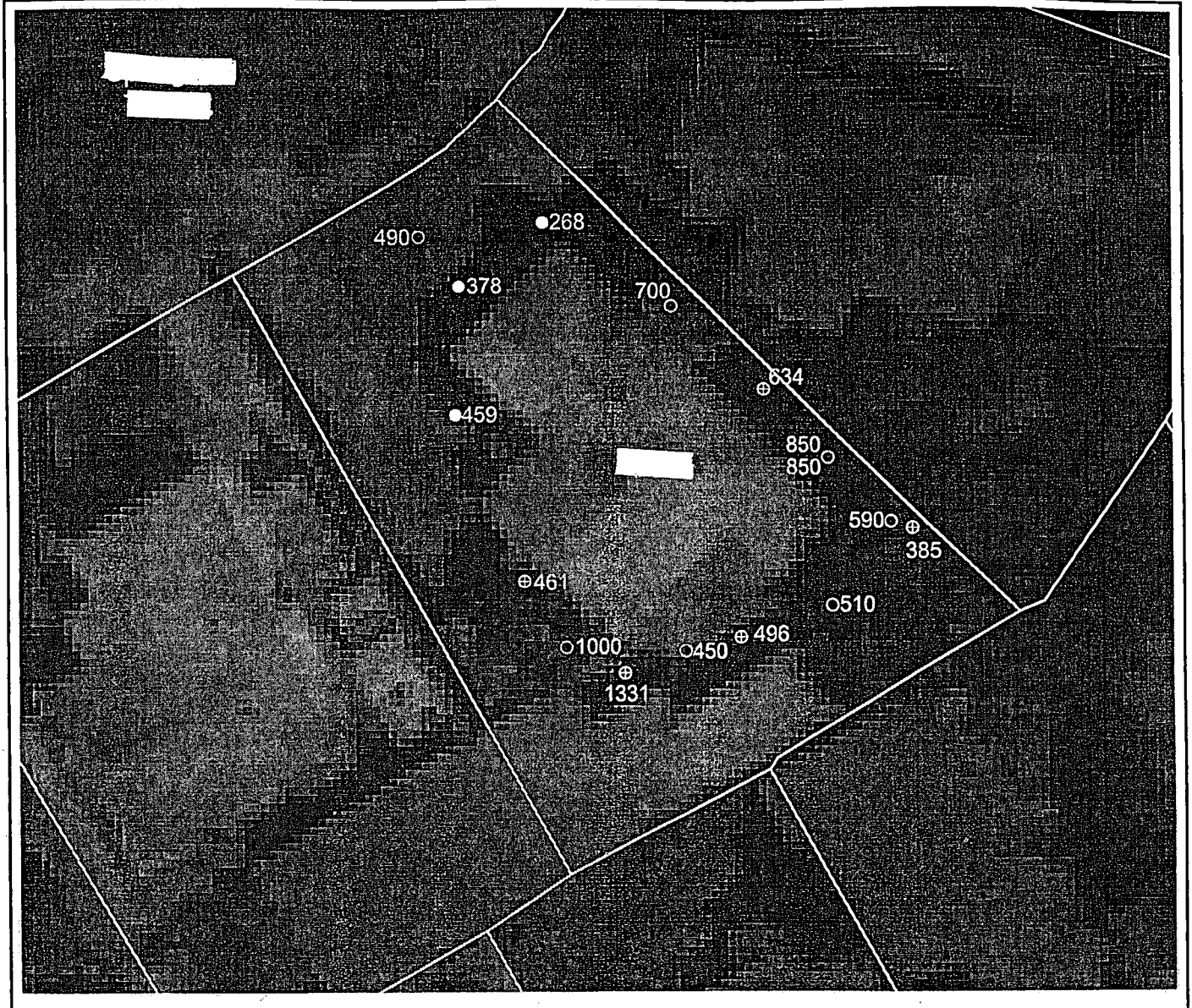
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-067-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 10 20 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

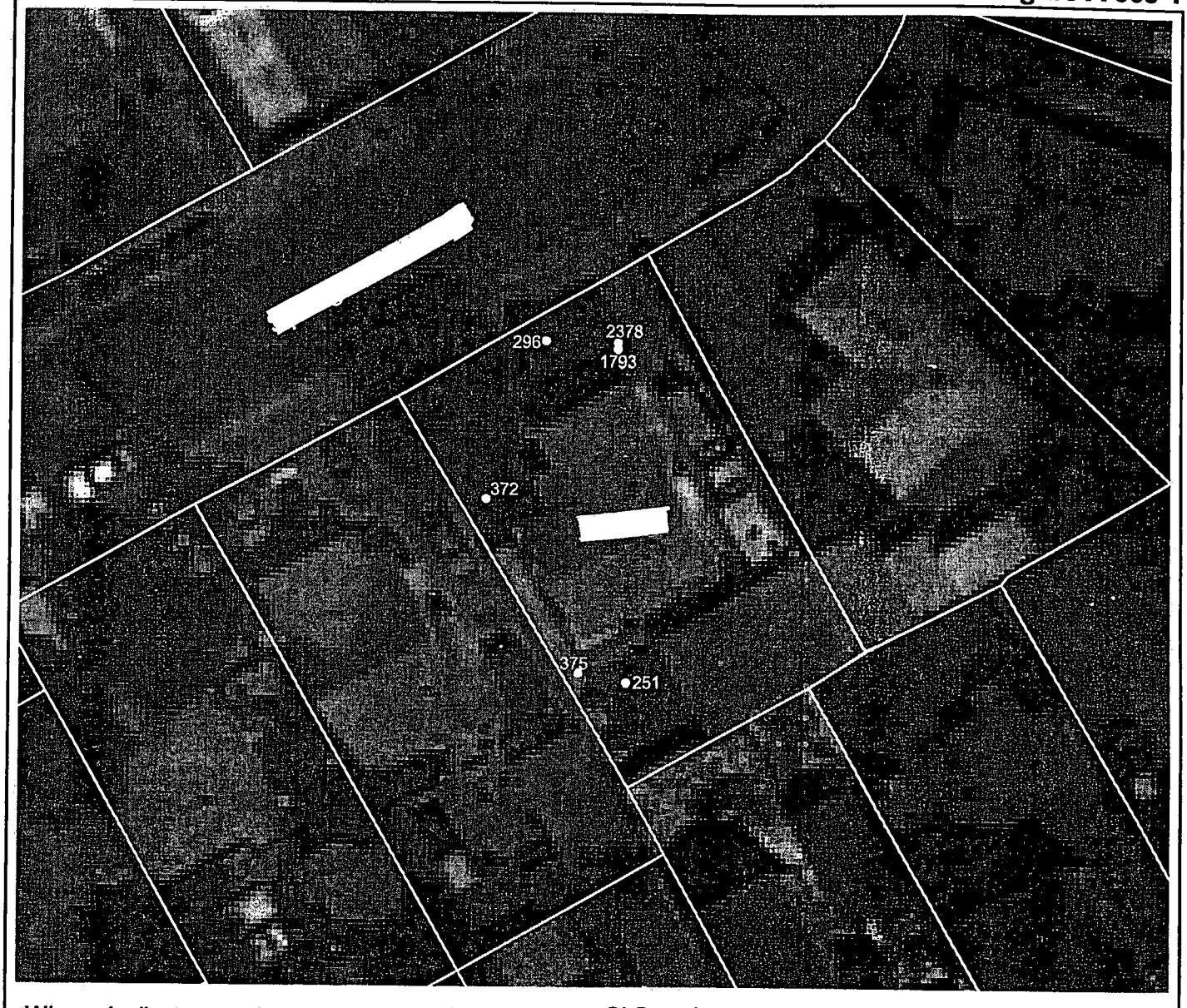
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-068-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate
- SI Samples were not collected at this property because access was denied. Analytical results shown were obtained from limited samplling previously conducted by EPA.

0 20 40 60 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples

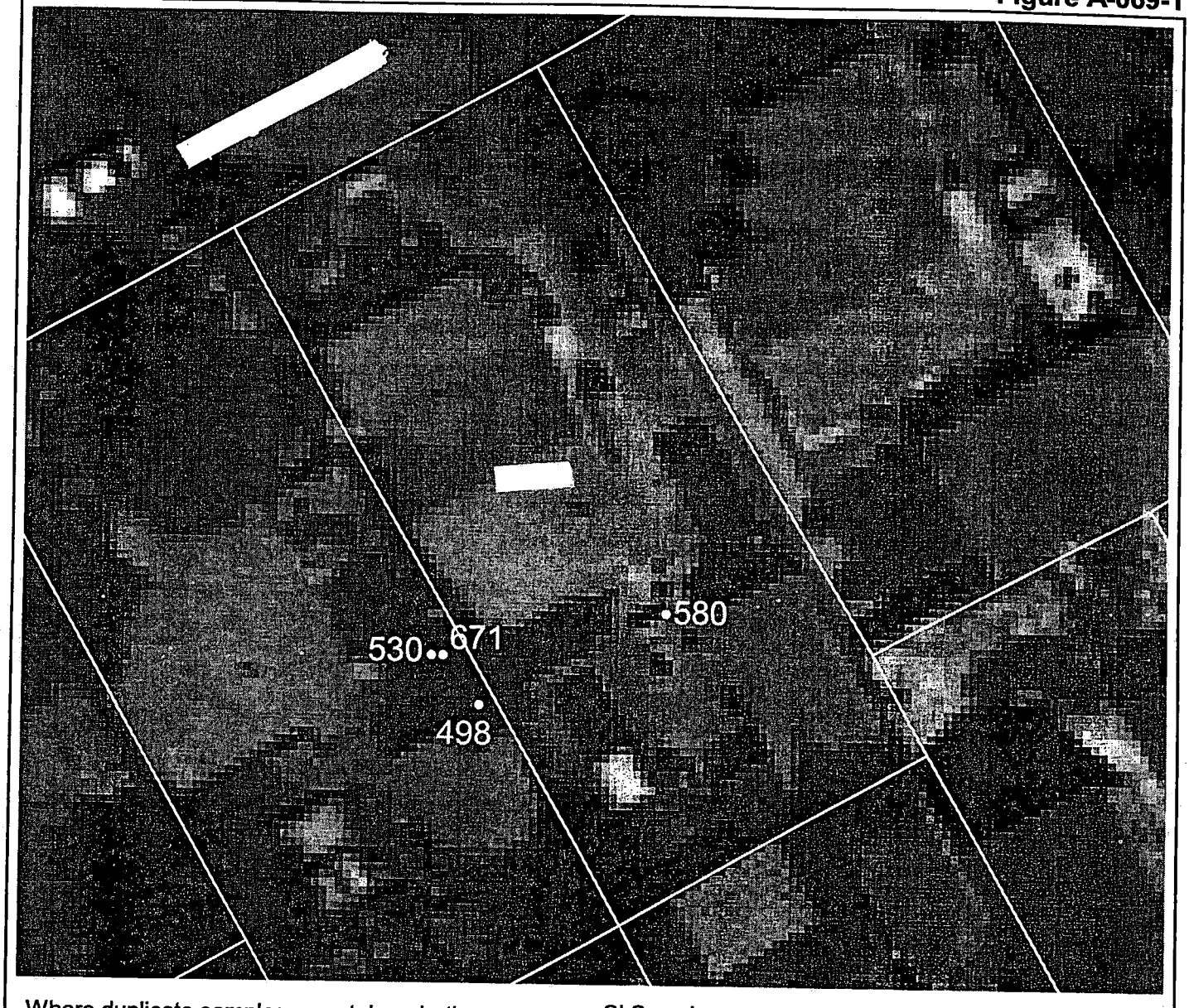
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

09/11/00

© PARSONS ENGINEERING SCIENCE, INC.

Figure A-069-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate
- SI Samples were not collected at this property because access was denied. Analytical results shown were obtained from limited samplling previously conducted by EPA.

0 10 20 30 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

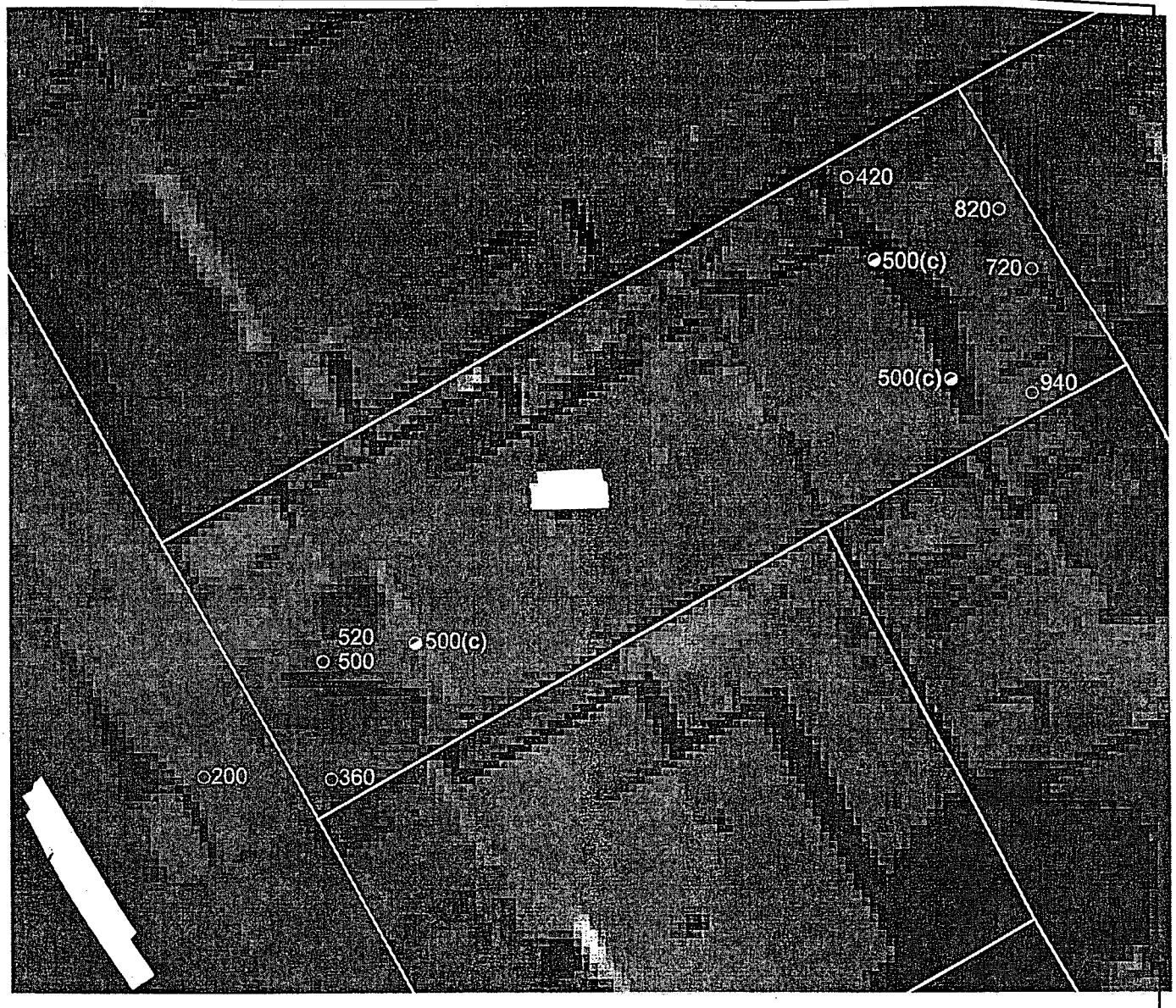
9999(c) "c" denotes composite lead concentration of combined dripline samples

Verdese Carter Park Project AlliedSignal, Inc.

Surface Soil Sample Results

09/11/00

Figure A-070-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 10 20 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

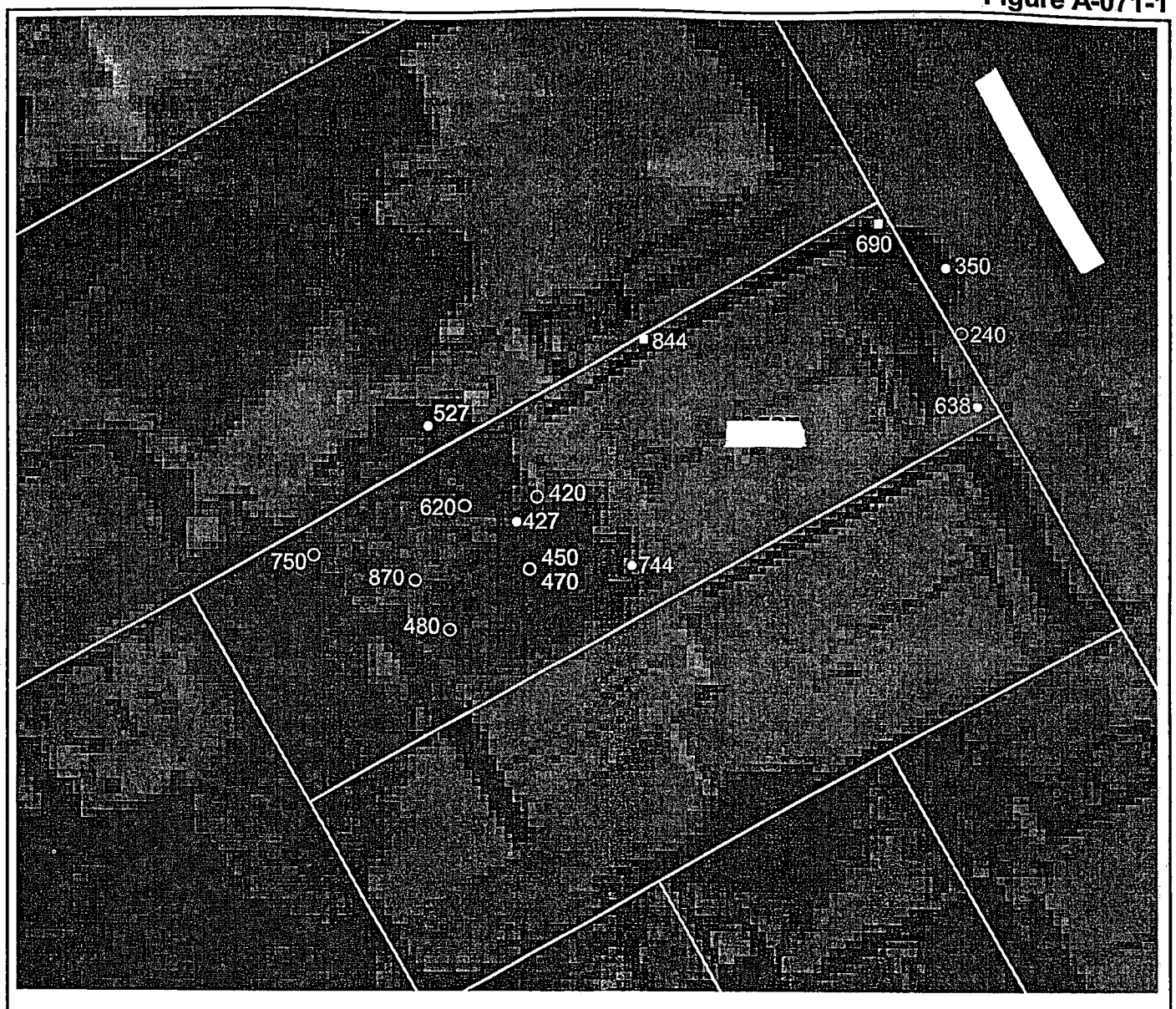
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/19/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-071-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 10 20 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

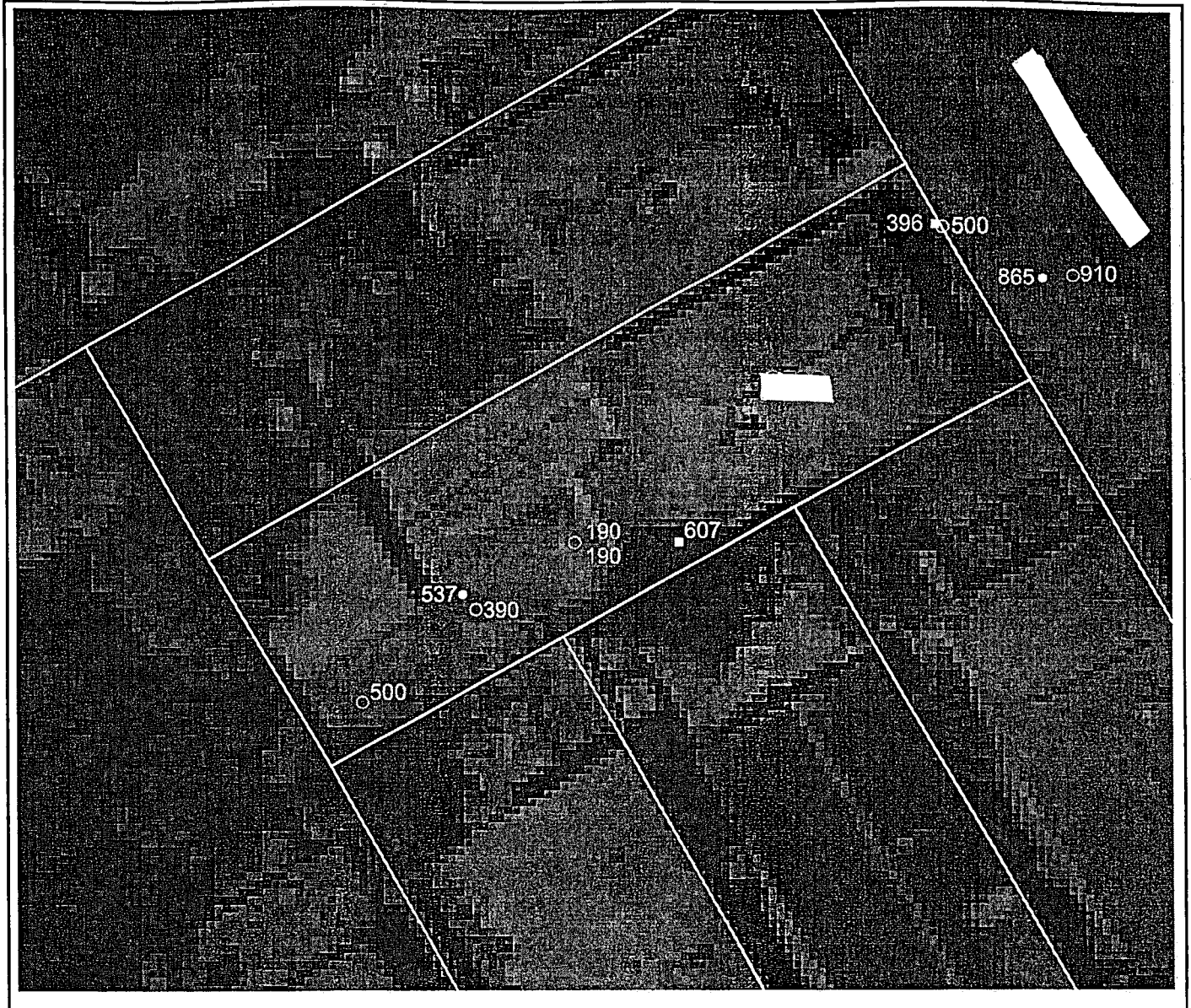
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/26/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-072-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 10 20 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

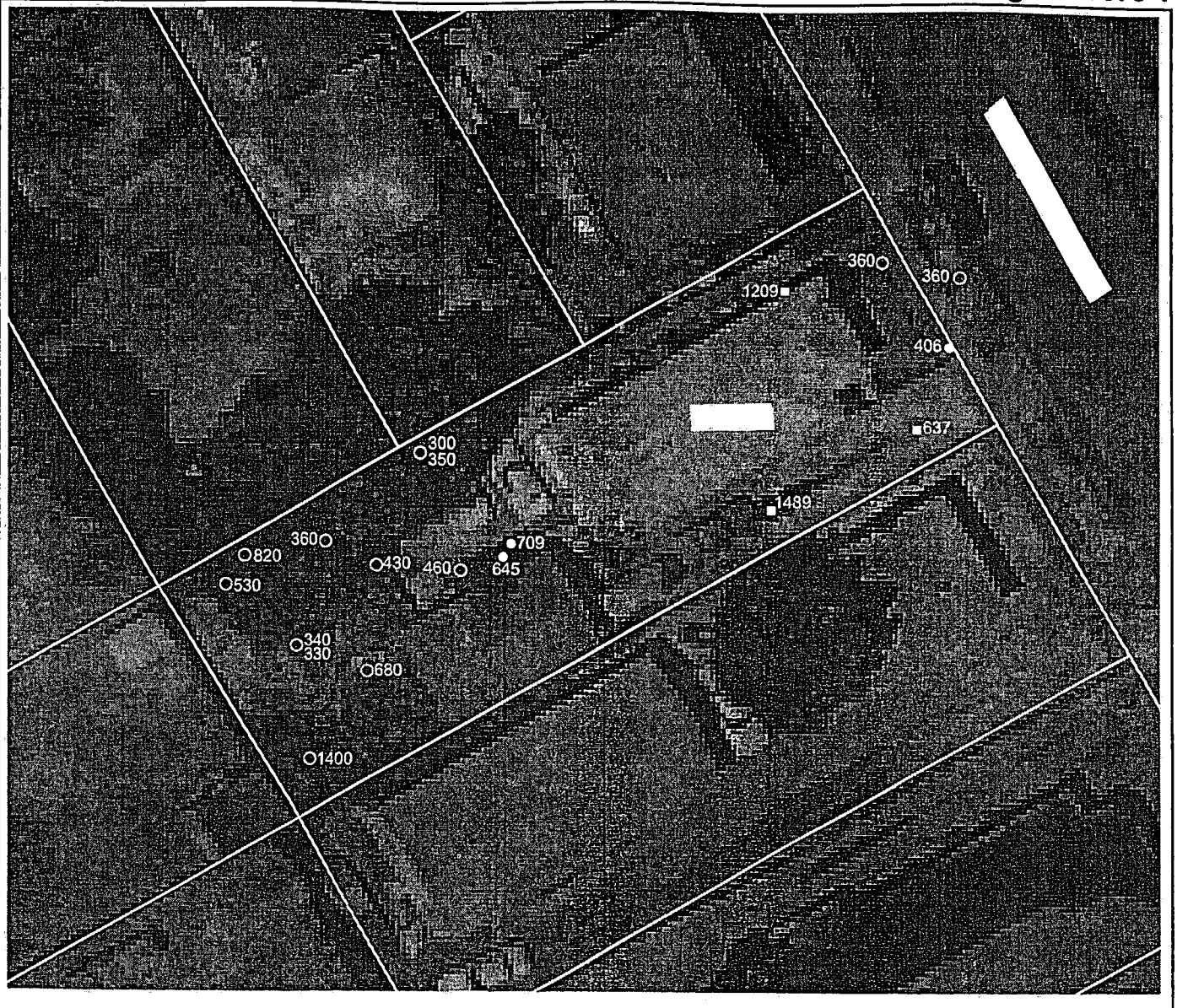
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/26/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-073-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples

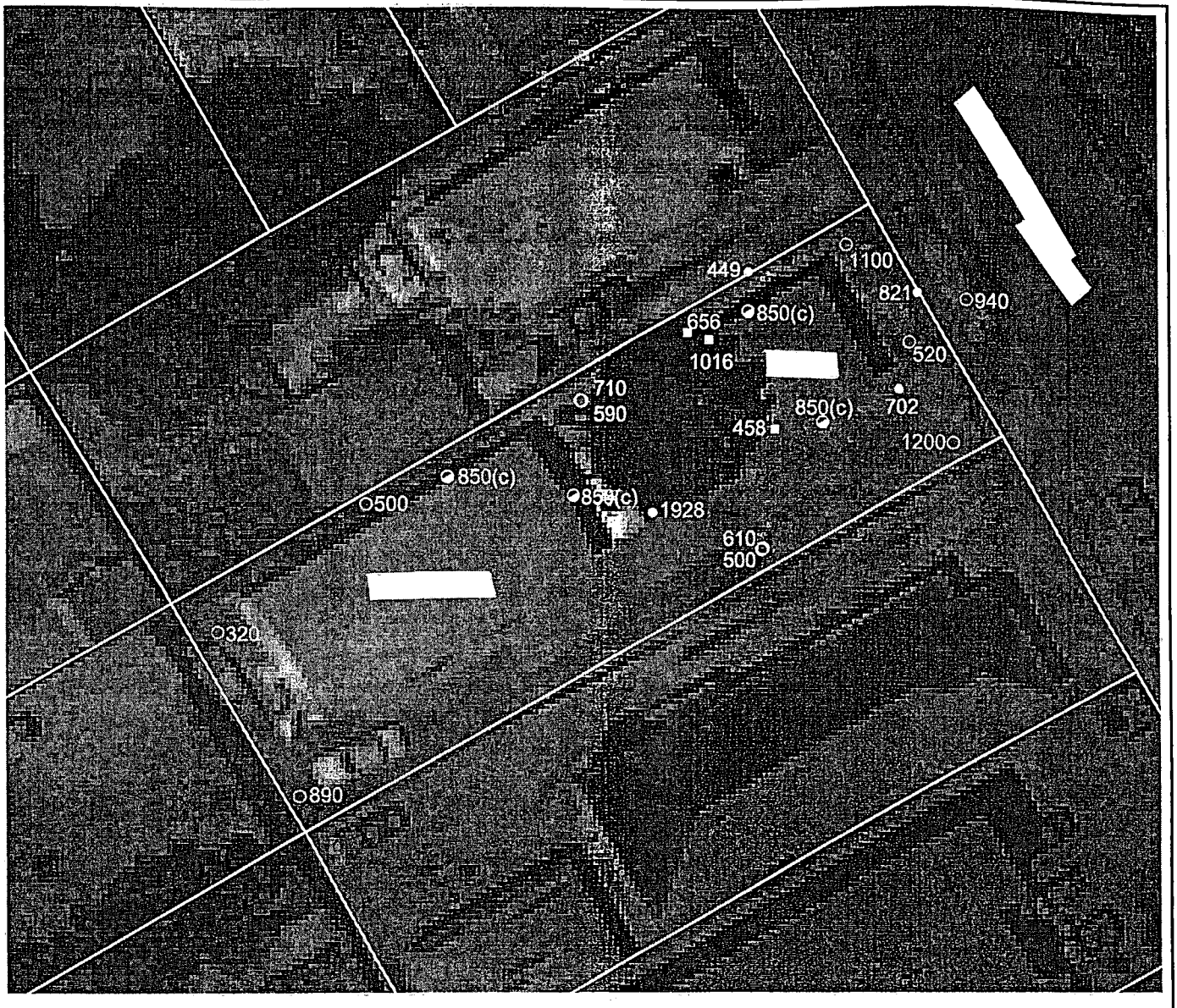
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/26/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-074-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

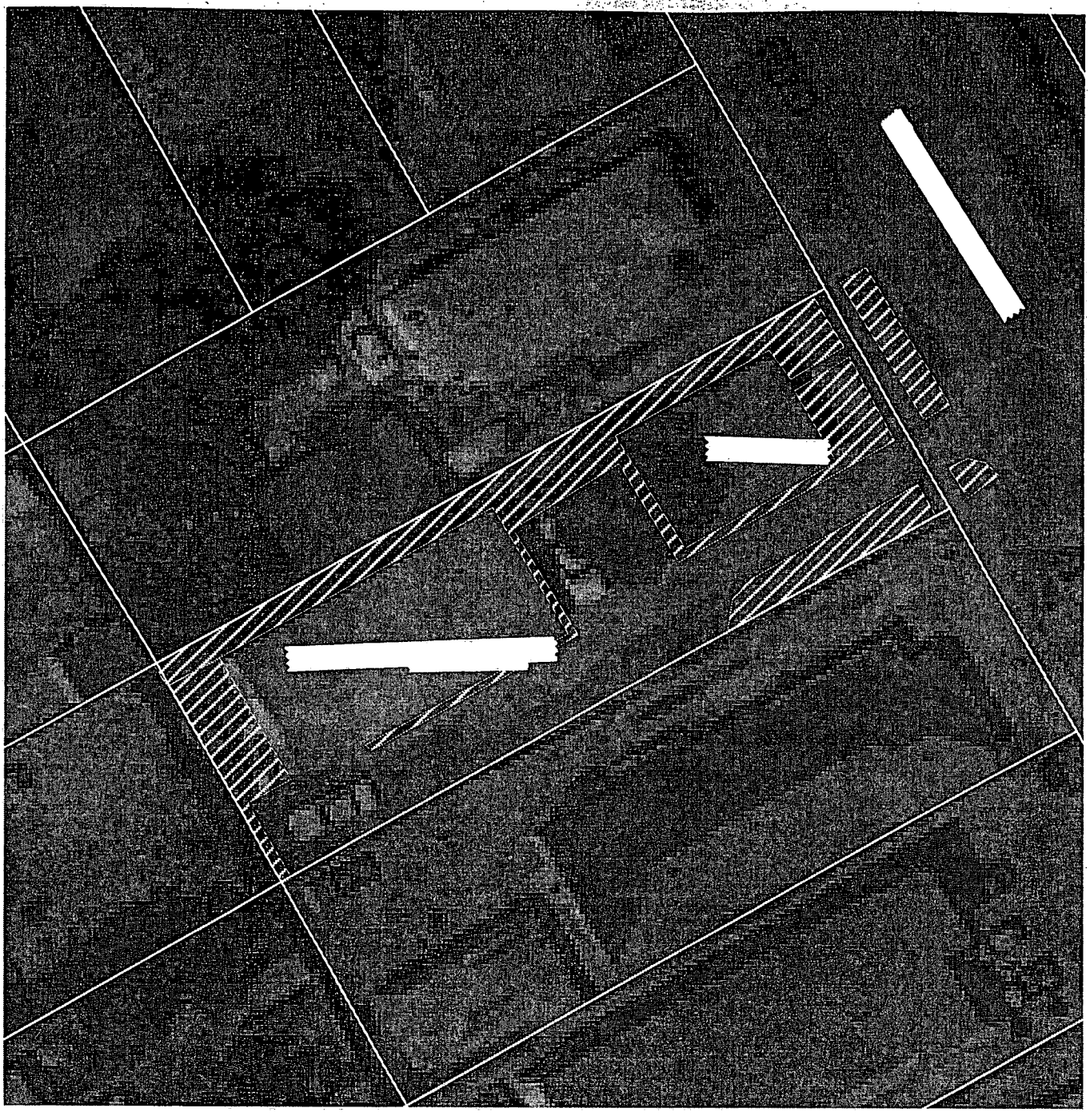
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/19/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-074-2



0 10 20 Feet

N

LEGEND

Approximate Area for Proposed Excavation

Marked parcel boundaries are approximate

Verdese Carter Park Project
AlliedSignal, Inc.

Proposed Excavation Area for:

PARSONS ENGINEERING SCIENCE, INC.

Figure A-075-1

- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 10 20 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

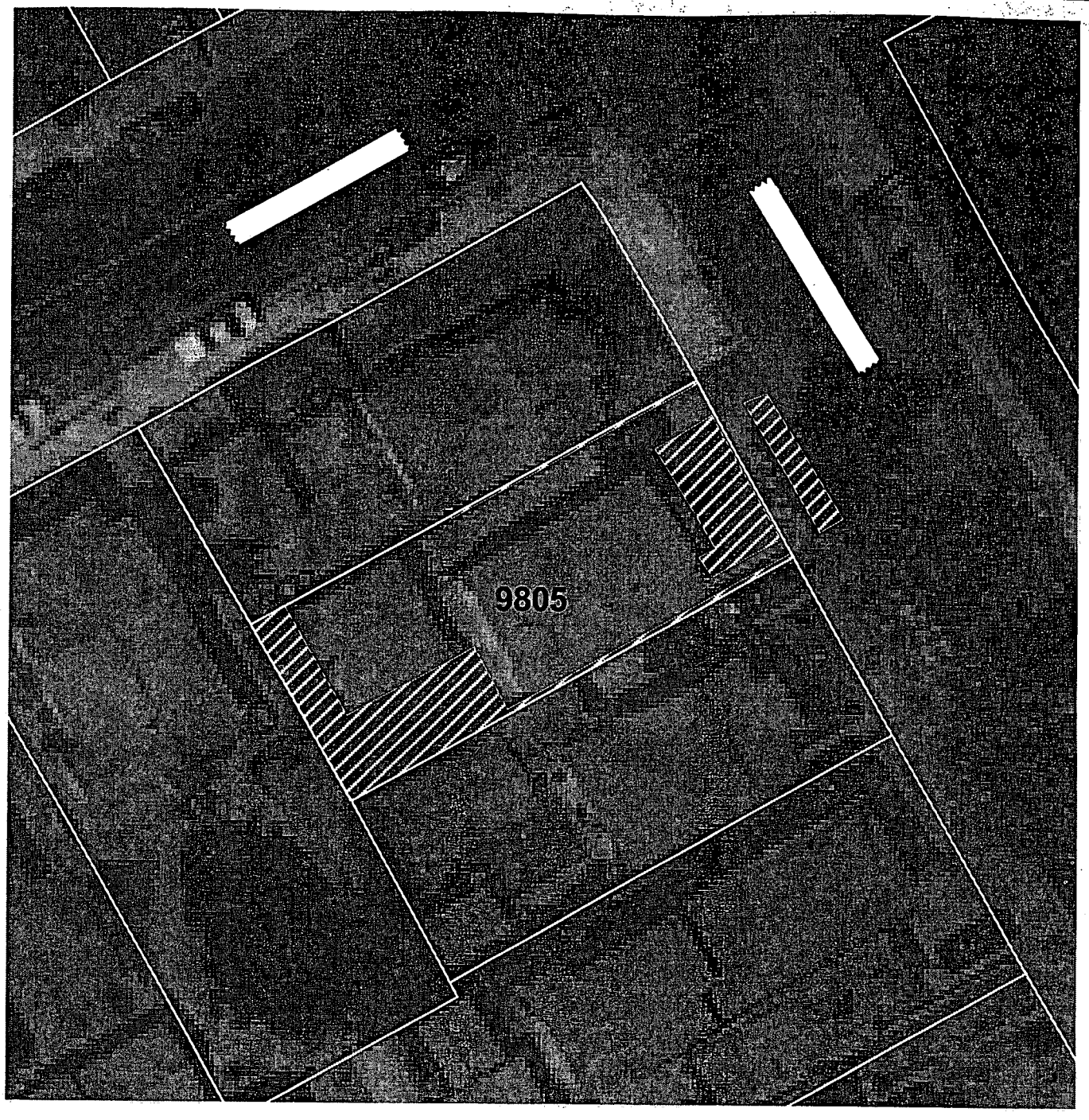
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/19/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-075-2



0 10 20 Feet

N

LEGEND

Approximate Area for Proposed Excavation

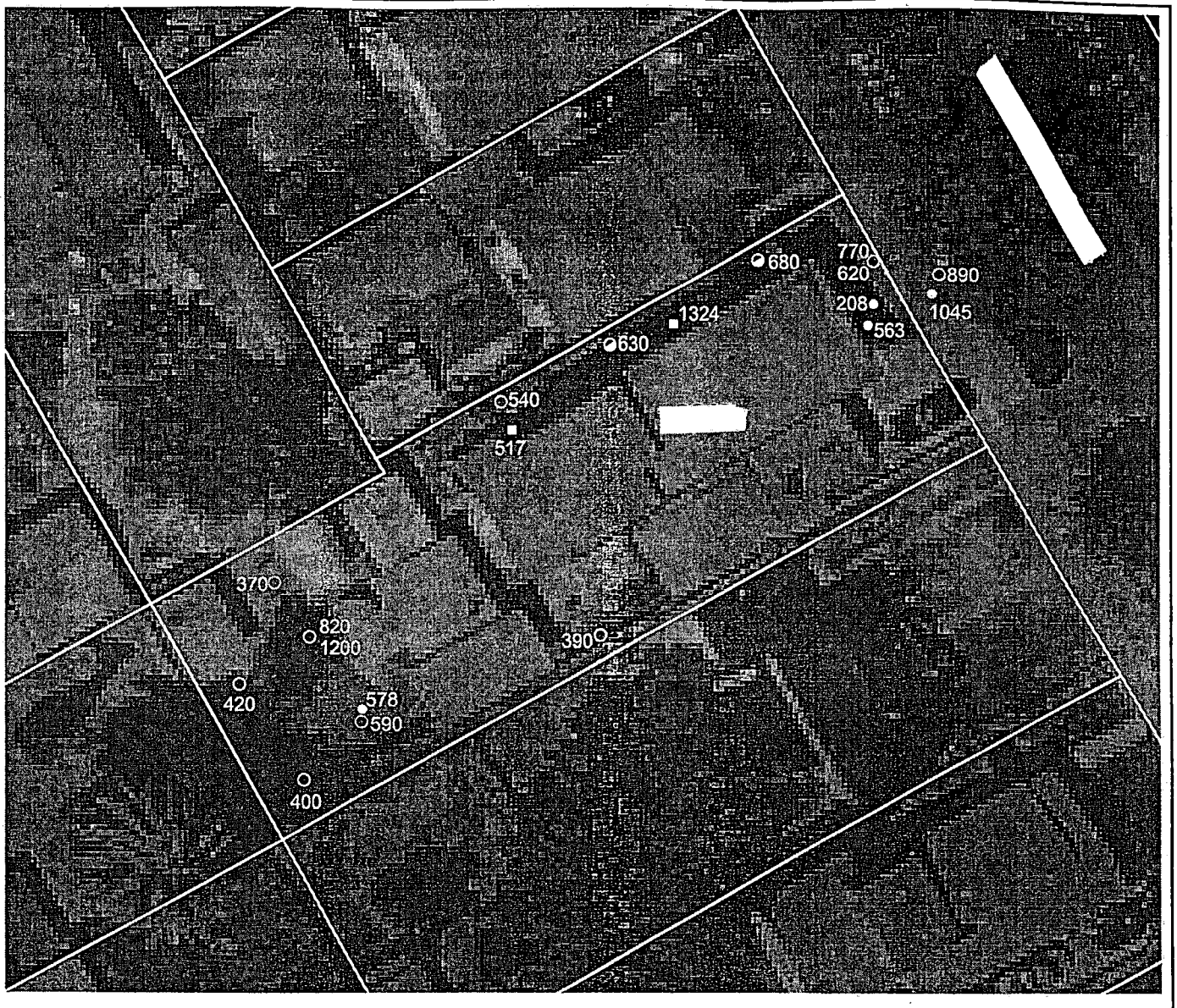
Marked parcel boundaries are approximate.

Verdese Carter Park Project
AlliedSignal, Inc.

Proposed Excavation Area for:

PARSONS ENGINEERING SCIENCE, INC.

Figure A-076-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 30 60 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

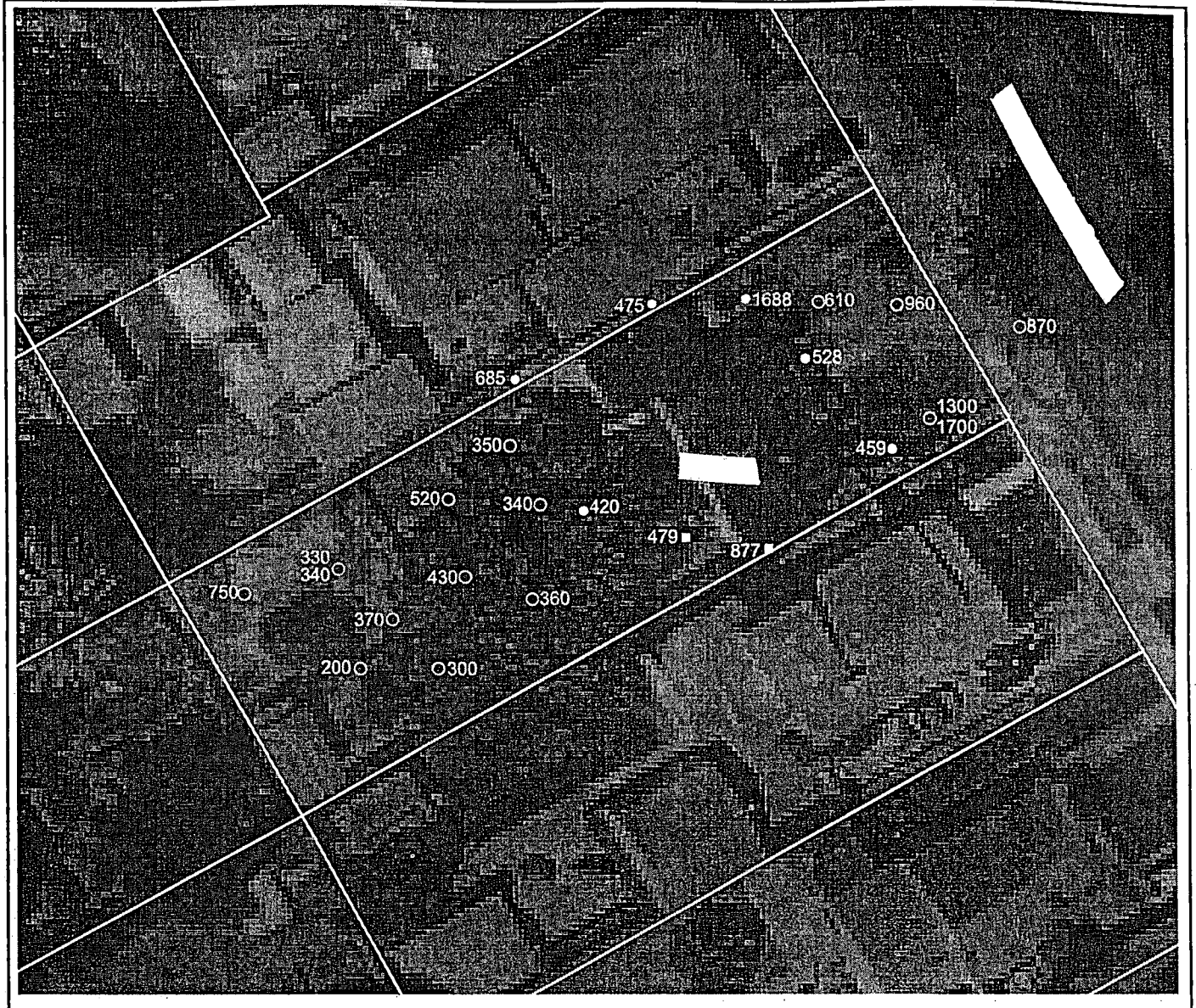
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

1/17/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-077-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

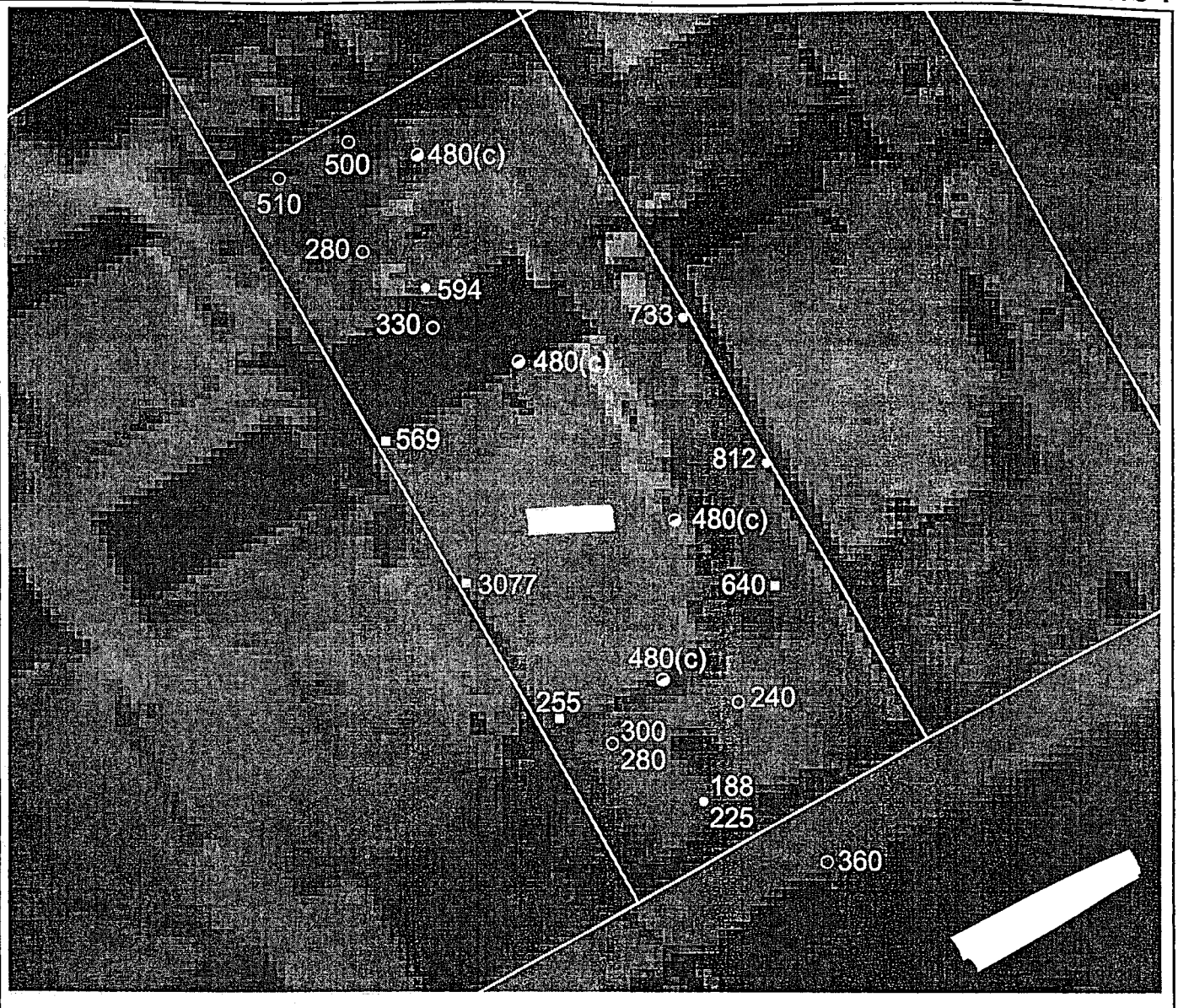
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/26/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-078-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 10 20 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

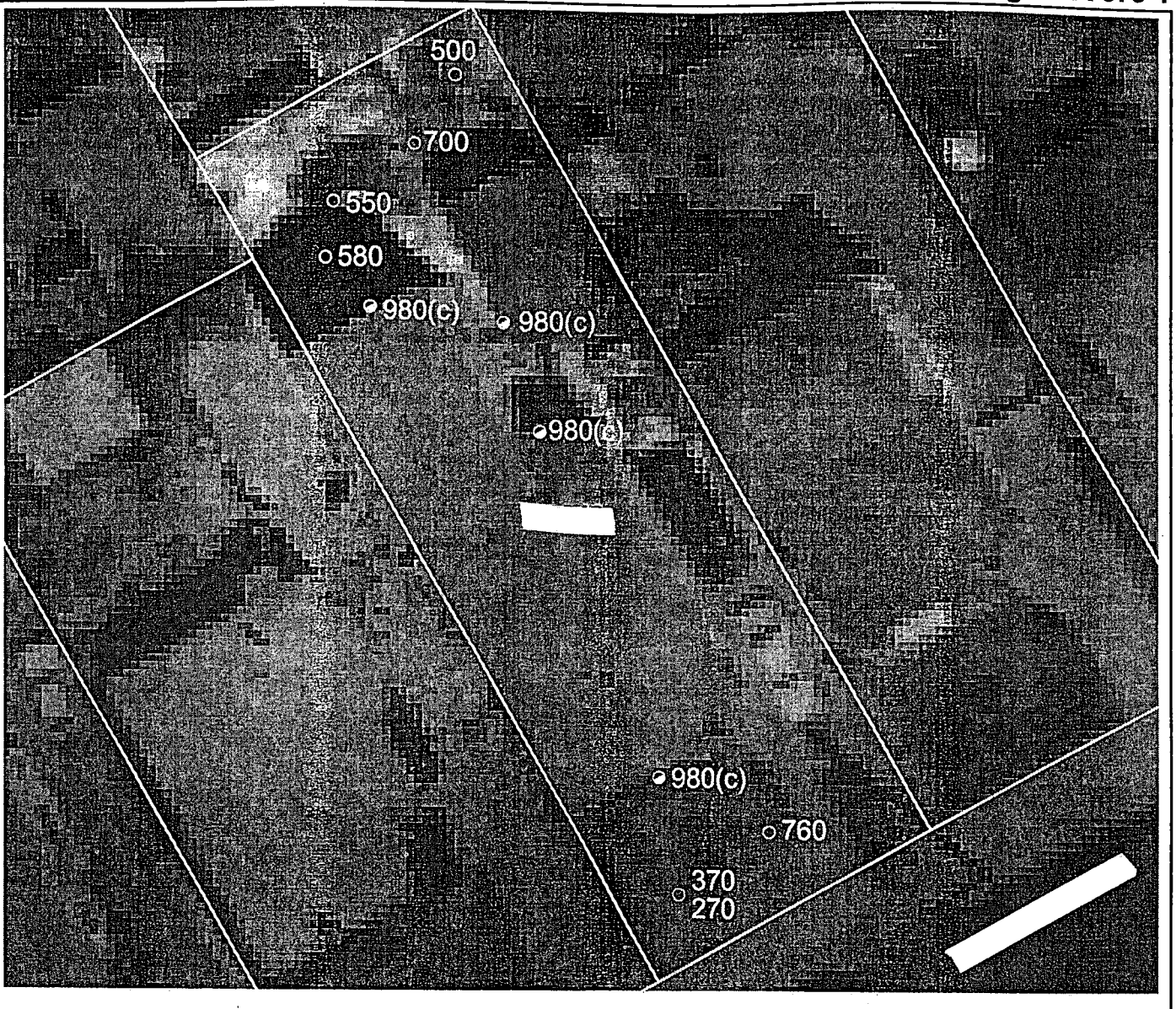
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/26/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-079-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 10 20 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

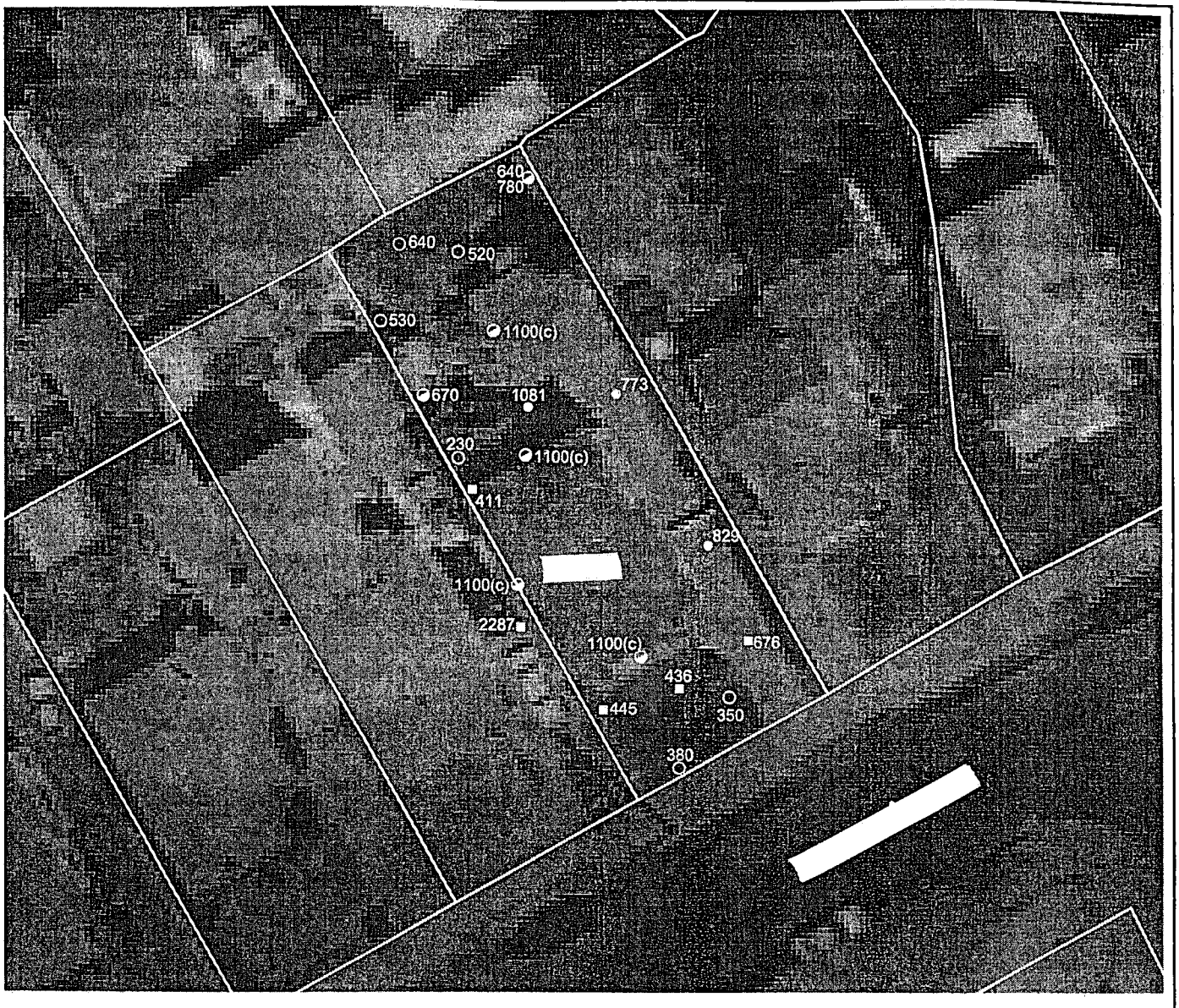
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/26/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-080-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 30 60 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

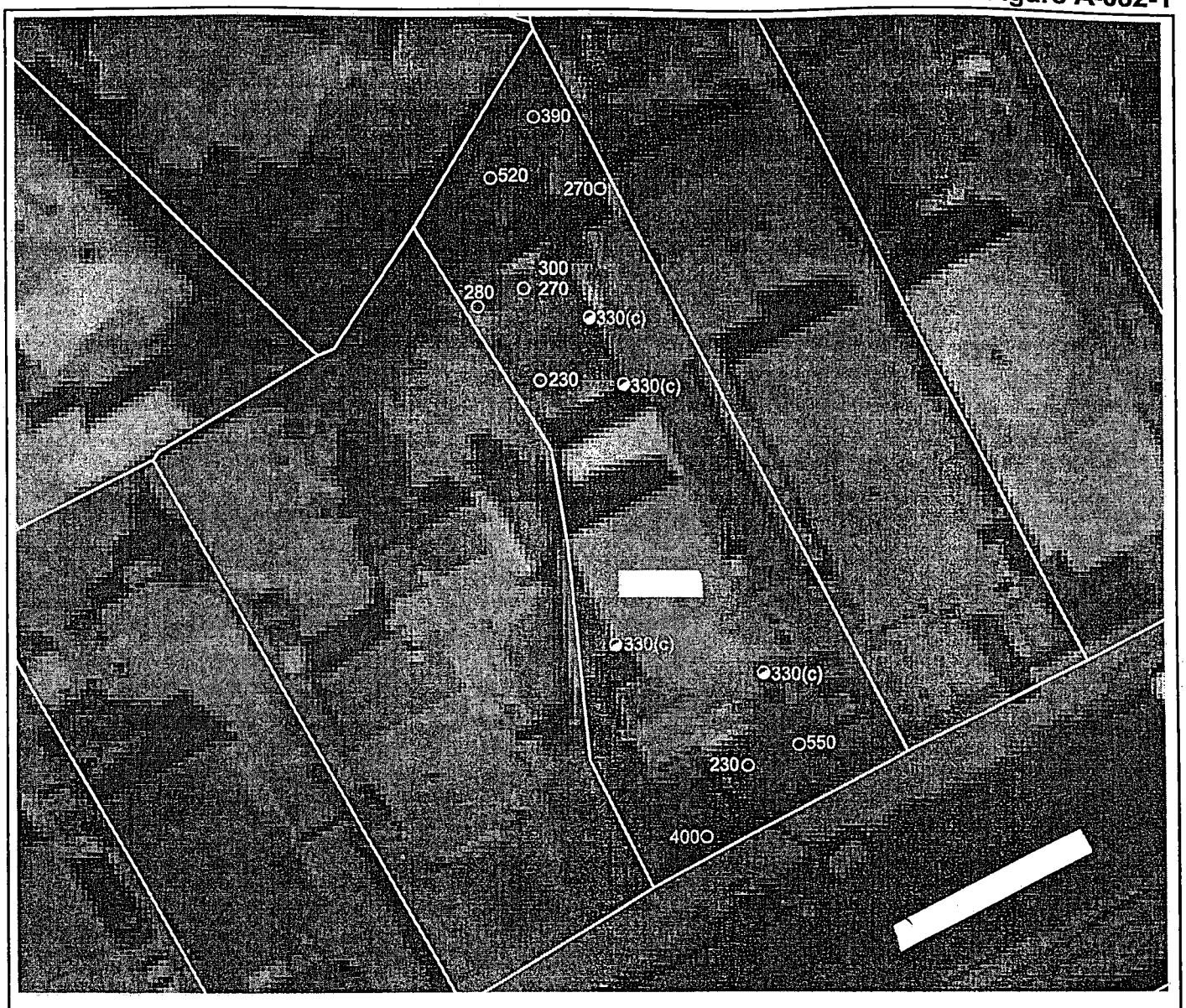
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

1/17/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-082-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

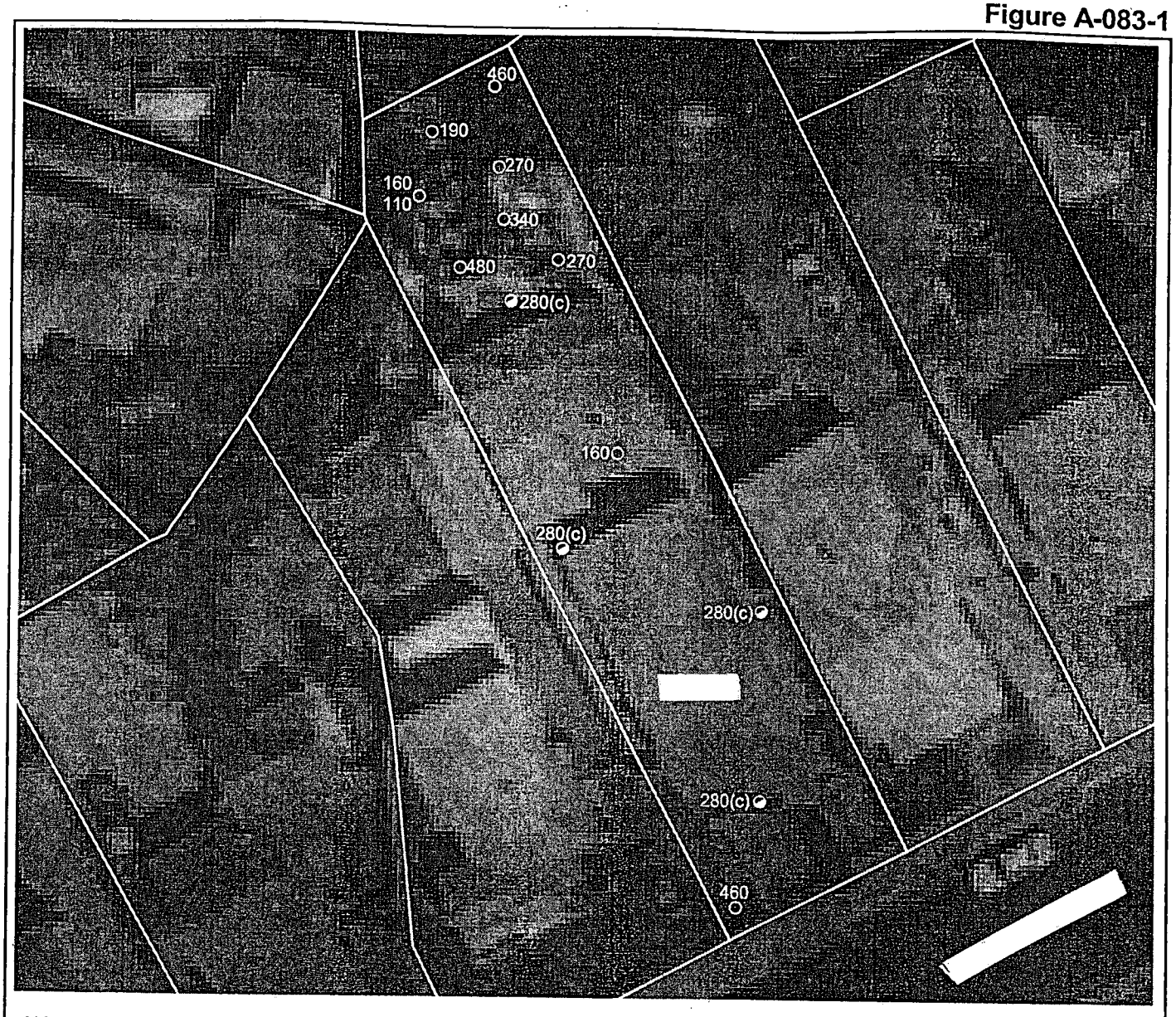
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/26/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-083-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

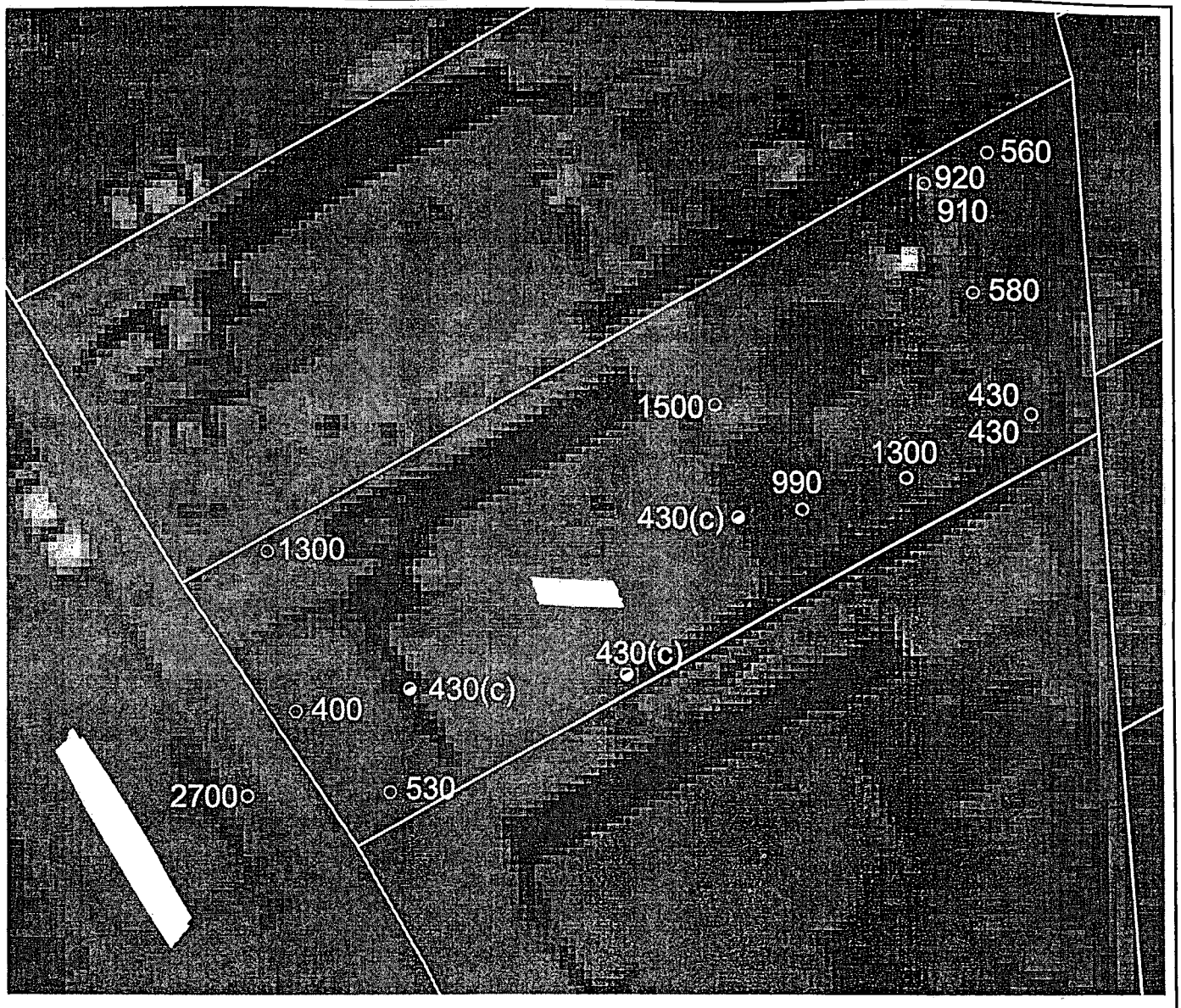
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/26/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-063-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 10 20 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/19/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-063-2

0 10 20 Feet

N

LEGEND

Approximate Area for Proposed Excavation

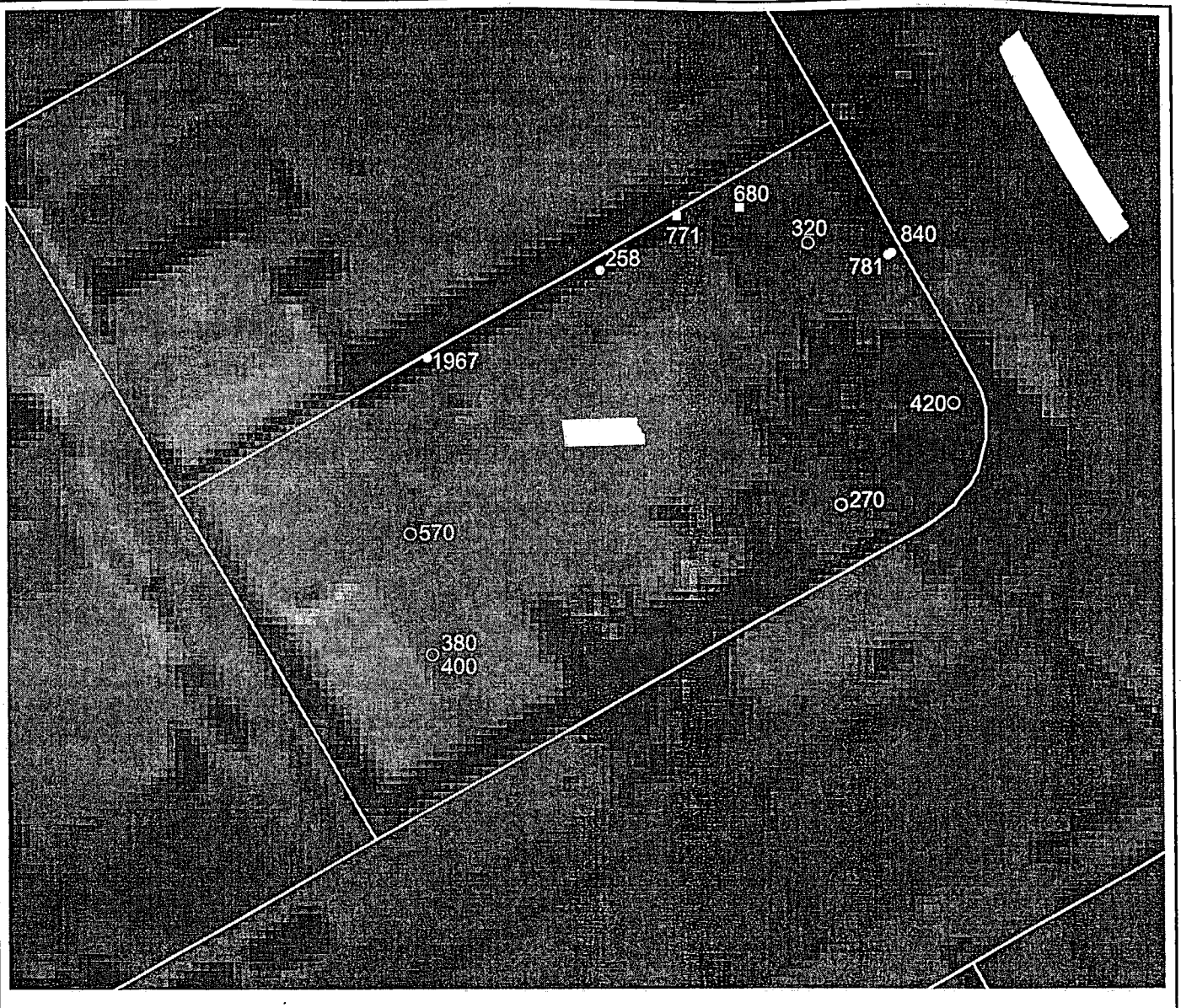
Marked parcel boundaries are approximate.

Verdese Carter Park Project
AlliedSignal, Inc.

Proposed Excavation Area for:

PARSONS ENGINEERING SCIENCE, INC.

Figure A-064-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 10 20 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples

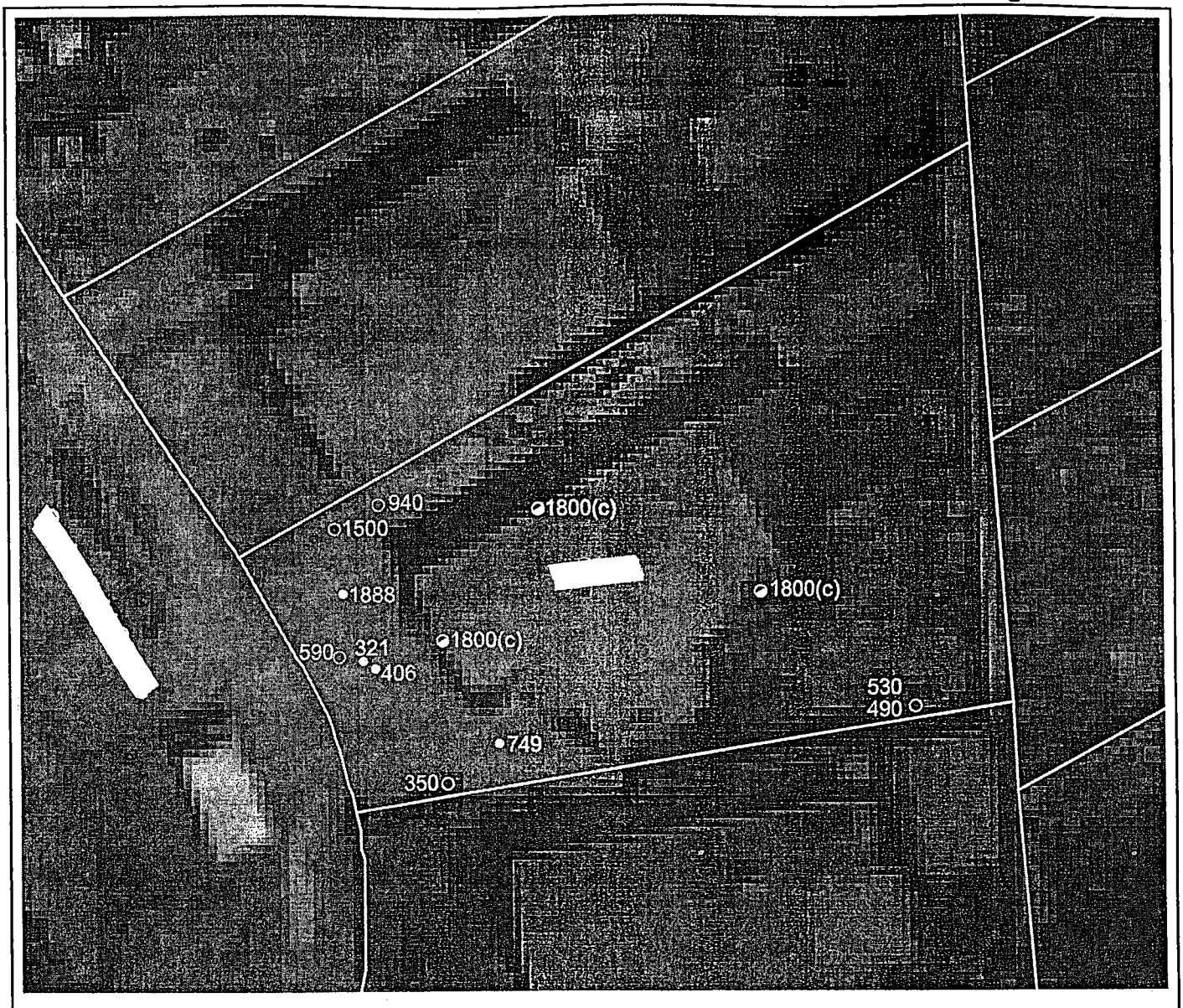
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-065-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 10 20 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-066-1

- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 10 20 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-084-1

- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/26/00

PARSONS ENGINEERING SCIENCE, INC.

Table A-006 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No. 006

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	SS-153	EPA	419	
	SS-155	EPA	465	
	SS-218	EPA	423	
Dripline Samples	SS-152	EPA	3676	
	SS-154	EPA	9999	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-014 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No. 014

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	VCP-S-675	EPA	259	
Dripline Samples	VCP-S-676	EPA	3923	
	VCP-S-677	EPA	379	
	VCP-S-678	EPA	700	
	VCP-S-679	EPA	219	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-027 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No. 027

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	VCP-S-666	EPA	291	
	VCP-S-667	EPA	211	
	VCP-S-671	EPA	351	
	VCP-S-673	EPA	330	
Dripline Samples	VCP-S-668	EPA	880	
	VCP-S-669	EPA	1740	
	VCP-S-670	EPA	958	
	VCP-S-672	EPA	4073	
	VCP-S-674	EPA	956	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-029 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.029

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	VCP-S-222	EPA	197	
	VCP-S-224	EPA	604	
	VCP-S-226	EPA	583	
	VCP-S-227	EPA	481	
	D-029-01	Parsons ES	370	
	D-029-02	Parsons ES	300	
	D-029-03	Parsons ES	570	
	D-029-04	Parsons ES	470	D-029-05
	D-029-05	Parsons ES	460	D-029-04
	D-029-06	Parsons ES	930	
	D-029-07	Parsons ES	460	
	D-029-08	Parsons ES	360	
	D-029-09	Parsons ES	310	
	D-029-10	Parsons ES	640	
	D-029-11	Parsons ES	990	D-029-12
	D-029-12	Parsons ES	1000	D-029-11
	D-029-13	Parsons ES	1300	
	D-029-14	Parsons ES	340	
	D-029-15	Parsons ES	320	
	D-029-16	Parsons ES	230	
	D-029-17	Parsons ES	450	
Dripline Samples	VCP-S-223	EPA	642	
	VCP-S-225	EPA	946	
	VCP-S-228	EPA	1692	
	VCP-S-229	EPA	466	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-030 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No. 030

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	VCP-S-181	EPA	979	
	VCP-S-184	EPA	519	
	D-030-01	Parsons ES	460	
	D-030-02	Parsons ES	720	
	D-030-03	Parsons ES	180	D-030-04
	D-030-04	Parsons ES	200	D-030-03
	D-030-05	Parsons ES	390	
	D-030-06	Parsons ES	530	
	D-030-07	Parsons ES	800	
Dripline Samples	VCP-S-182	EPA	907	
	VCP-S-183	EPA	539	
	VCP-S-185	EPA	618	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhldbase (ms access)

Table A-031 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.031

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	VCP-S-623	EPA	330	
	VCP-S-624	EPA	782	
	VCP-S-626	EPA	723	
	VCP-S-627	EPA	774	
	D-031-01	Parsons ES	330	
	D-031-02	Parsons ES	910	
	D-031-03	Parsons ES	150	D-031-04
	D-031-04	Parsons ES	160	D-031-03
	D-031-05	Parsons ES	140	
	D-031-06	Parsons ES	340	
Dripline Samples	SS-98	EPA	658	
	SS-99	EPA	1411	
	VCP-S-625	EPA	494	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-032 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No. 032

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	SS-96	EPA	1232	
	D-032-01	Parsons ES	280	
	D-032-02	Parsons ES	460	
	D-032-03	Parsons ES	340	
	D-032-04	Parsons ES	420	
	D-032-05	Parsons ES	350	
	D-032-06	Parsons ES	430	
	D-032-07	Parsons ES	390	
	D-032-08	Parsons ES	410	
	D-032-09	Parsons ES	320	
	D-032-10	Parsons ES	710	D-032-11
	D-032-11	Parsons ES	840	D-032-10
	D-032-12	Parsons ES	880	
	D-032-13	Parsons ES	550	
	D-032-14	Parsons ES	350	
	D-032-16	Parsons ES	370	D-032-17
	D-032-17	Parsons ES	460	D-032-16
Dripline Samples	SS-212	EPA	804	
	SS-95	EPA	656	
	SS-97	EPA	570	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-033 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.033

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	VCP-S-329	EPA	718	
	D-033-01	Parsons ES	370	
	D-033-02	Parsons ES	380	
	D-033-05	Parsons ES	530	D-033-06
	D-033-06	Parsons ES	530	D-033-05
	D-033-07	Parsons ES	630	
	D-033-08	Parsons ES	840	
	D-033-09	Parsons ES	310	D-033-11
	D-033-11	Parsons ES	360	D-033-09
	D-033-12	Parsons ES	590	
	D-033-13	Parsons ES	720	
	D-033-14	Parsons ES	830	
Dripline Samples	VCP-S-326	EPA	315	
	VCP-S-327	EPA	1101	
	VCP-S-328	EPA	952	
	VCP-S-330	EPA	519	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mnfdbase (ms access)

Table A-034 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.034

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	SG-20	EPA	50	
	SG-22	EPA	1360	
	D-034-01	Parsons ES	750	
	D-034-02	Parsons ES	180	
	D-034-03	Parsons ES	1100	
	D-034-04	Parsons ES	250	
	D-034-05	Parsons ES	850	
	D-034-06	Parsons ES	2600	D-034-07
	D-034-07	Parsons ES	970	D-034-06
	D-034-08	Parsons ES	1900	
	D-034-09	Parsons ES	410	
	D-034-10	Parsons ES	1300	
	D-034-11	Parsons ES	1200	
Dripline Samples	SG-21	EPA	1721	
	SG-23	EPA	299	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mnfdbase (ms access)

Table A-036 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.036

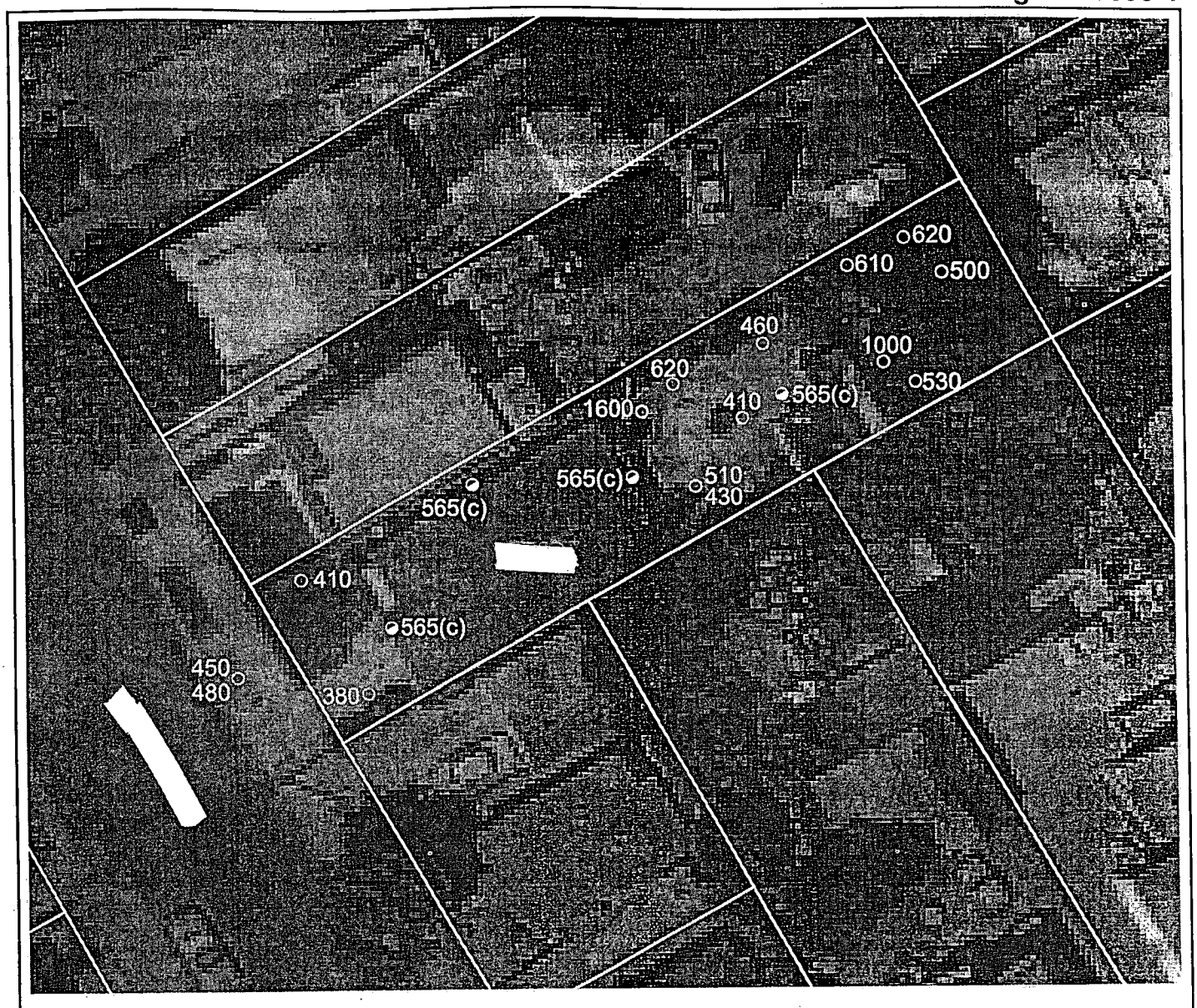
	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	SG-19	EPA	539	
	D-036-01	Parsons ES	310	
	D-036-02	Parsons ES	300	D-036-03
	D-036-03	Parsons ES	230	D-036-02
	D-036-04	Parsons ES	290	
	D-036-05	Parsons ES	380	
Dripline Samples	BH-17-S	EPA	284	
	SG-18	EPA	1715	
	C-036-01	Parsons ES	720(c)	
	C-036-02	Parsons ES	720(c)	
	C-036-03	Parsons ES	720(c)	
	C-036-04	Parsons ES	720(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese:mhfdbase (ms access)

Figure A-058-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples

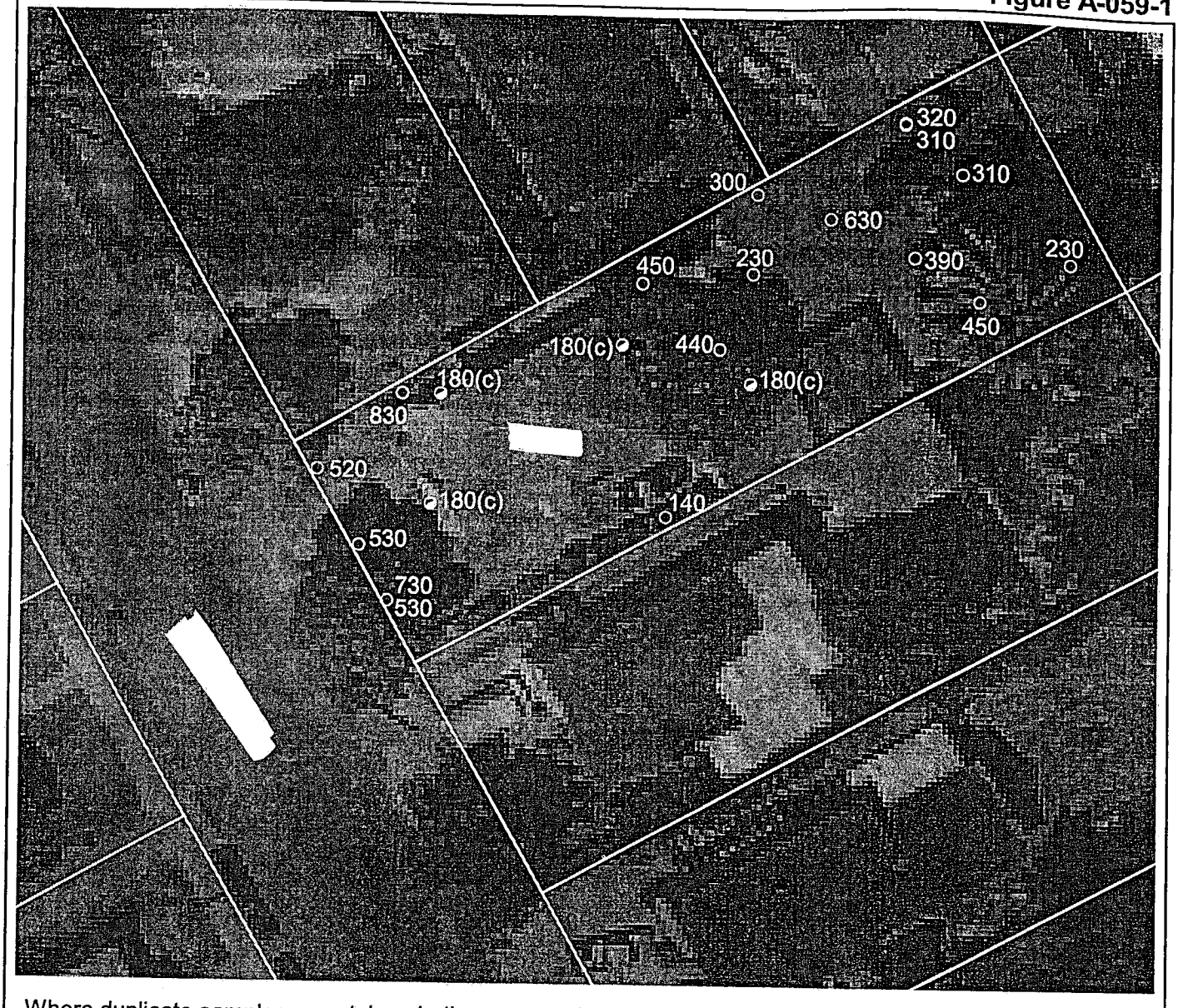
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-059-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 20 40 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

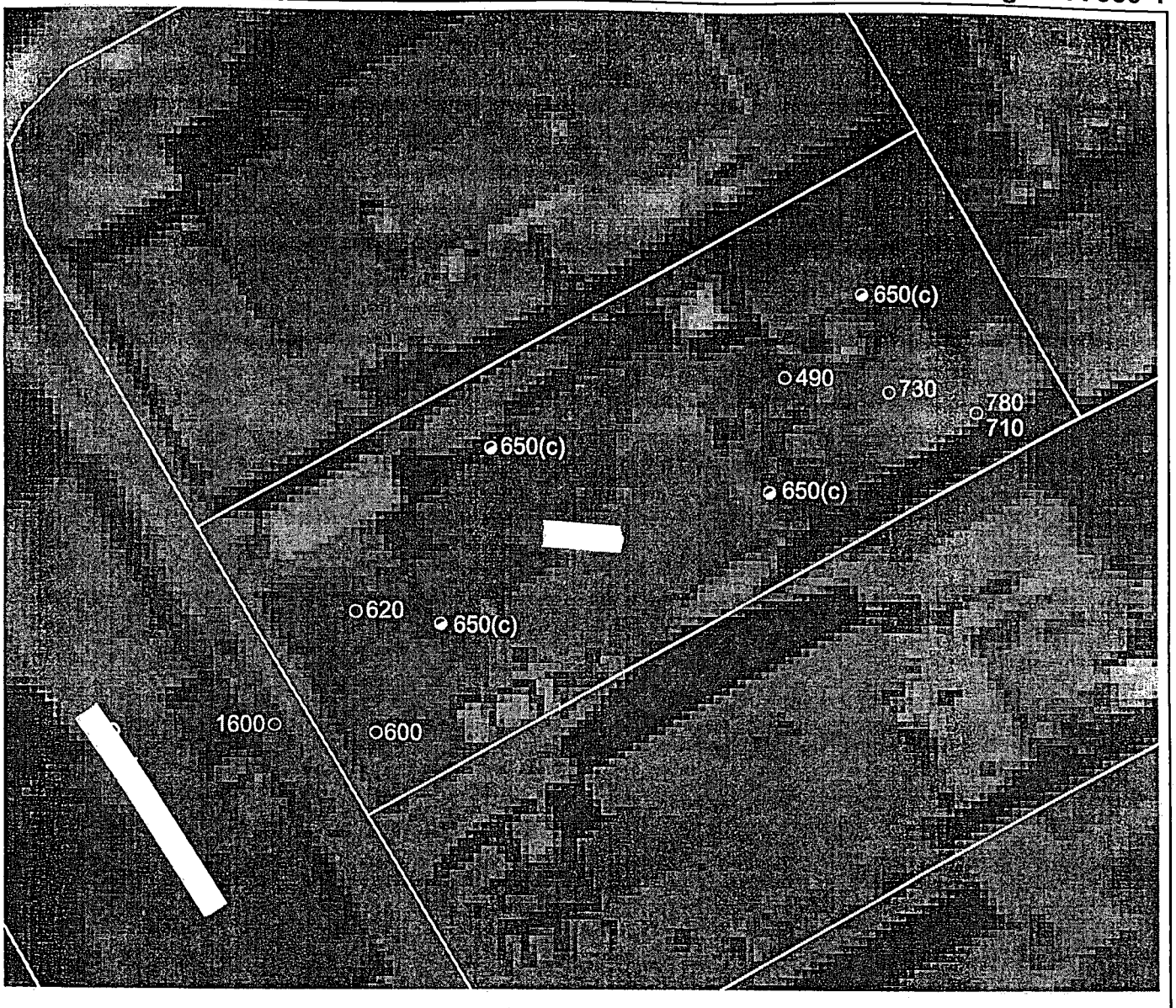
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-060-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 10 20 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

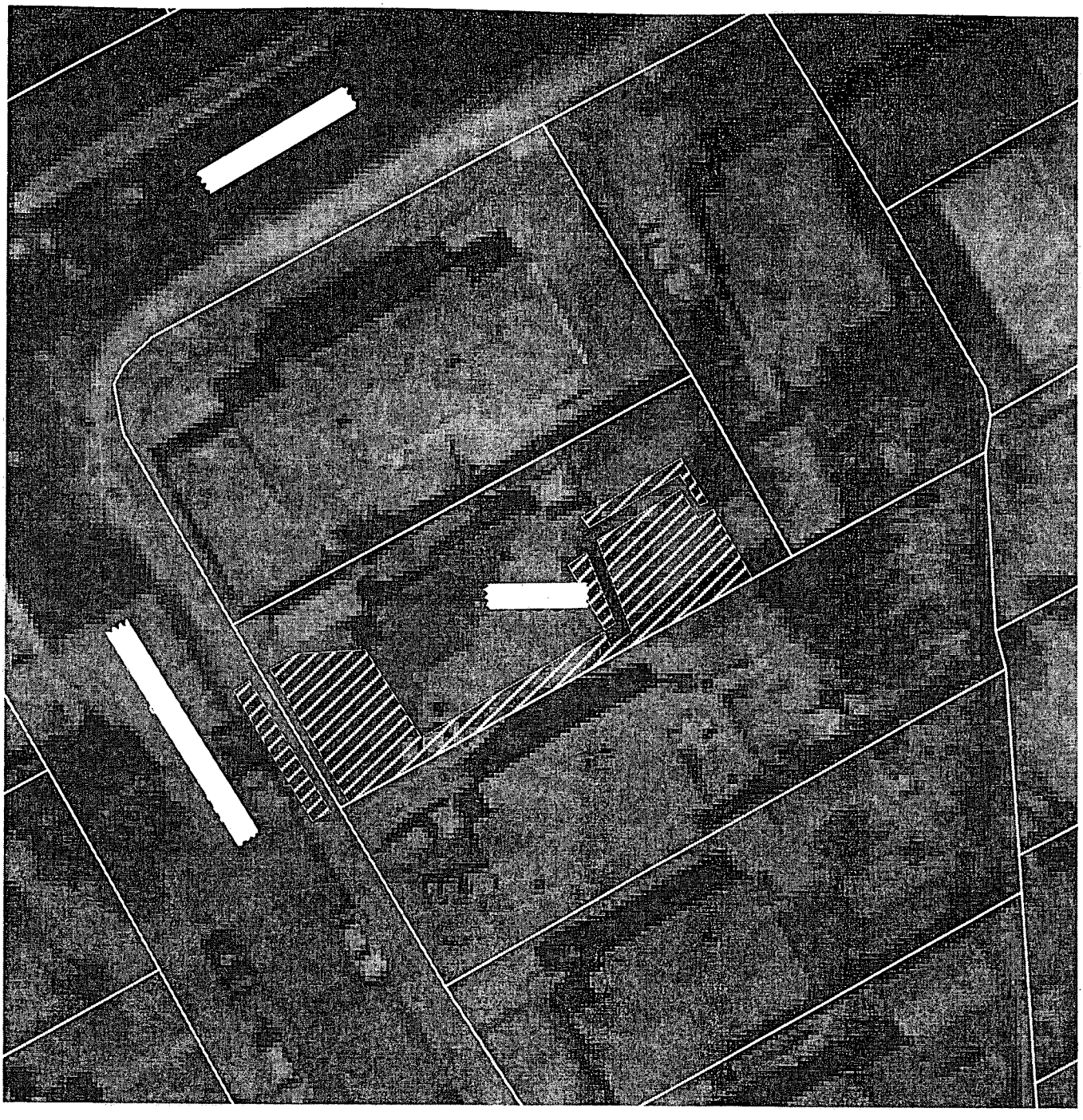
Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/19/00

PARSONS ENGINEERING SCIENCE, INC.

Figure A-060-2



0 10 20 Feet

N

LEGEND

Approximate Area for Proposed Excavation

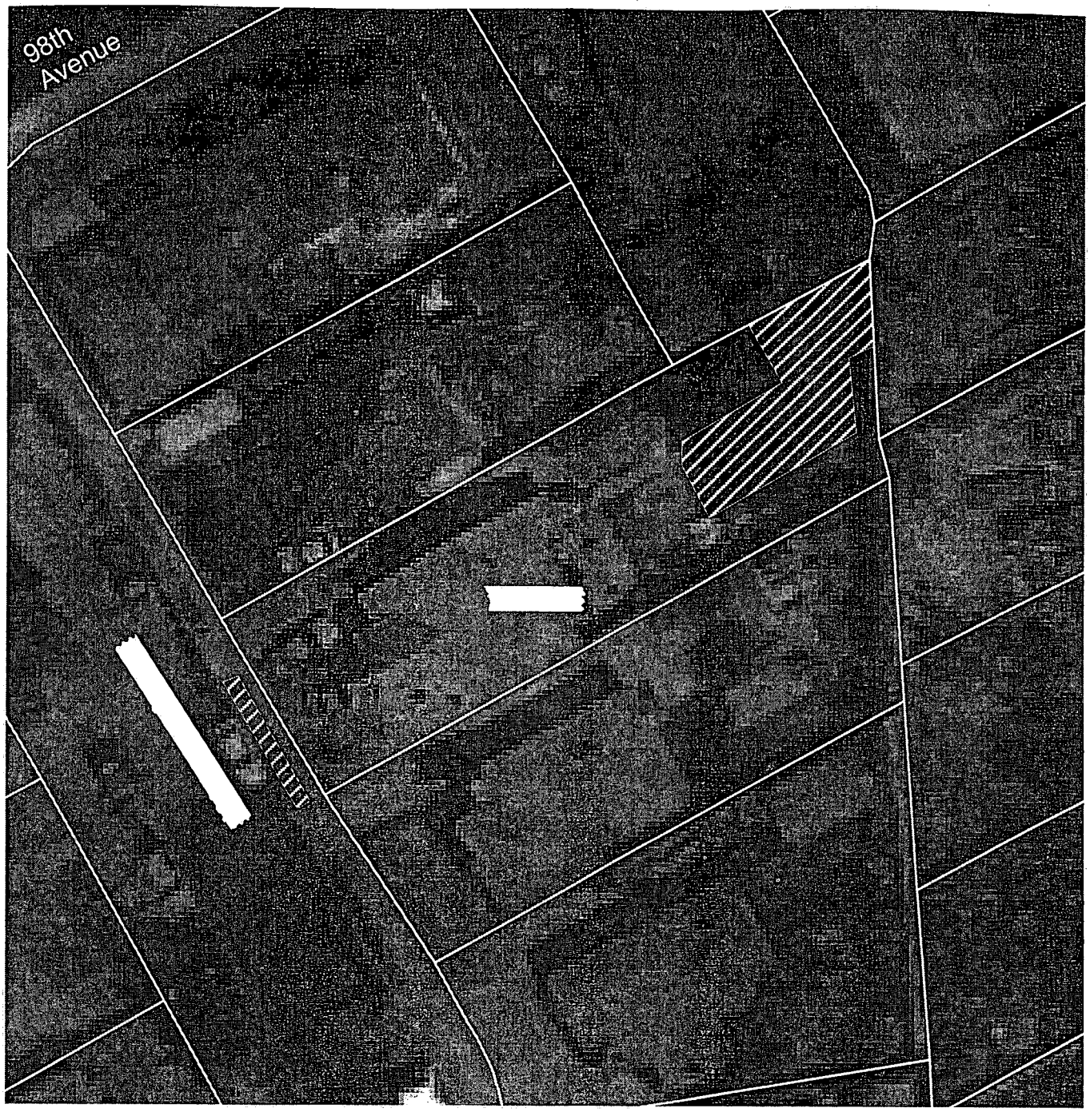
Marked parcel boundaries are approximate.

Verdese Carter Park Project
AlliedSignal, Inc.

Proposed Excavation Area for:

PARSONS ENGINEERING SCIENCE, INC.

Figure A-061-2



0 10 20 Feet

N

LEGEND

Approximate Area for Proposed Excavation

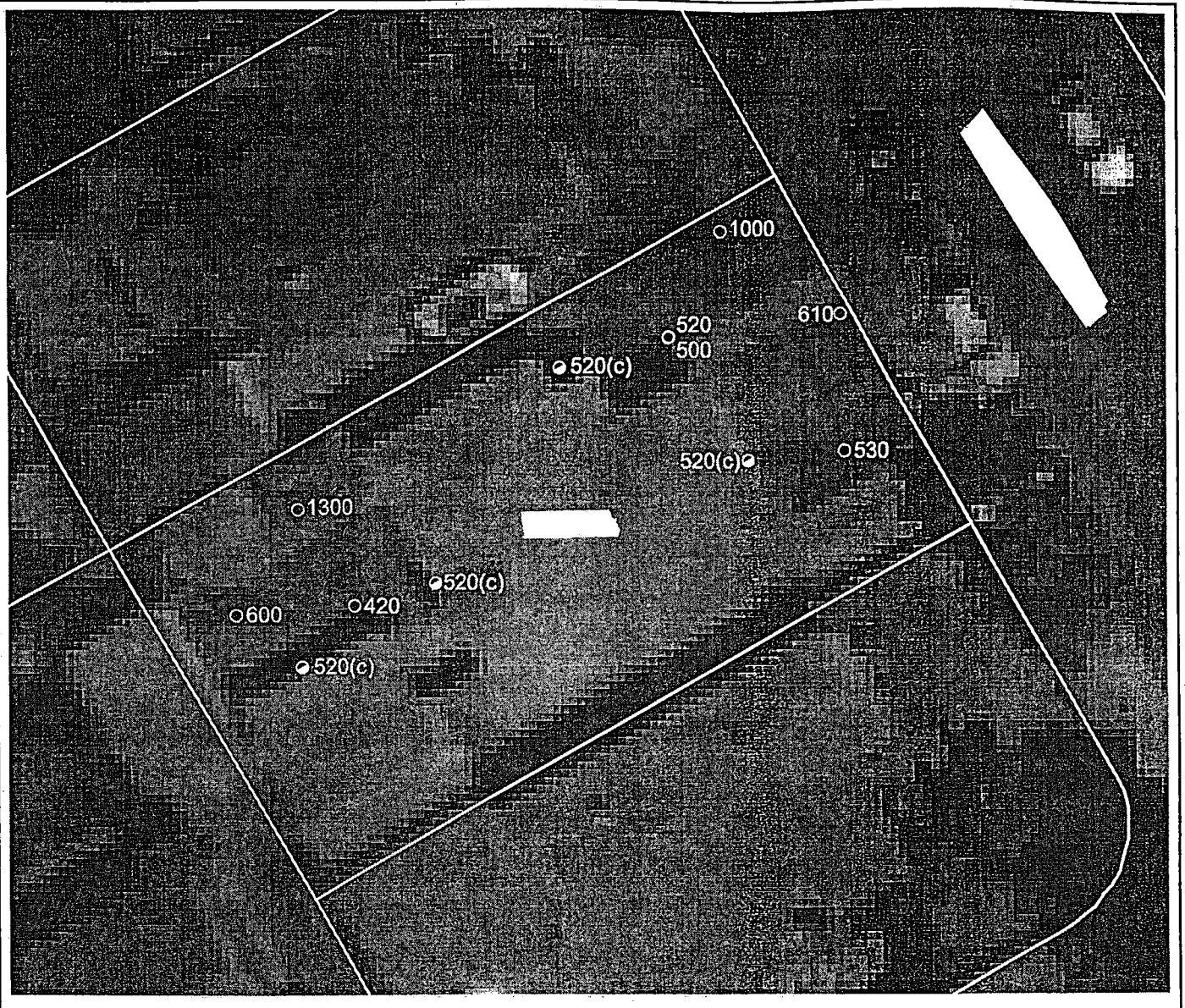
Marked parcel boundaries are approximate

Verdese Carter Park Project
AlliedSignal, Inc.

Proposed Excavation Area for:

PARSONS ENGINEERING SCIENCE, INC.

Figure A-062-1



- Where duplicate samples were taken, both concentrations are shown near the sampling location.
- Marked parcel boundaries are approximate.
- Soil sample locations are approximate

0 10 20 Feet

N

Parsons ES Delineation Samples
- Yard Sample
- Dripline Sample

EPA Delineation Samples
- Dripline Sample
- Yard Sample
- Undesignated Sample

9999 Lead Concentration in mg/Kg

9999(c) 'C' denotes composite lead concentration of combined dripline samples.

Verdese Carter Park Project
AlliedSignal, Inc.

Surface Soil Sample Results

01/25/00

PARSONS ENGINEERING SCIENCE, INC.

Table A-038 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No. 038

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	SG-14	EPA	712	
	SS-135	EPA	399	
	SS-137	EPA	475	
	SS-216	EPA	601	
Dripline Samples	BH-13-S	EPA	1562	
	SG-12	EPA	1181	
	SG-15	EPA	544	
	SS-134	EPA	1076	
	SS-136	EPA	1036	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-039 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.039

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-039-01	Parsons ES	3500	D-039-02
	D-039-02	Parsons ES	2200	D-039-01
	D-039-03	Parsons ES	810	
	D-039-04	Parsons ES	1500	
	D-039-05	Parsons ES	710	
	D-039-06	Parsons ES	550	
	D-039-07	Parsons ES	3300	
	D-039-08	Parsons ES	970	
	D-039-09	Parsons ES	1100	
	D-039-10	Parsons ES	1400	
	D-039-11	Parsons ES	150	
	D-039-12	Parsons ES	2400	
	D-039-13	Parsons ES	1000	
	D-039-14	Parsons ES	2400	
	D-039-15	Parsons ES	1300	D-039-16
	D-039-16	Parsons ES	1200	D-039-15
Dripline Samples	C-039-01	Parsons ES	1200(c)	
	C-039-02	Parsons ES	1200(c)	
	C-039-03	Parsons ES	1200(c)	
	C-039-04	Parsons ES	1200(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mnfobase (ms access)

Table A-040 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No. 040

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	SG-75	EPA	881	
Dripline Samples	SG-74	EPA	786	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-041 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.041

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-041-01	Parsons ES	510	
	D-041-02	Parsons ES	510	
	D-041-03	Parsons ES	3000	D-041-04
	D-041-04	Parsons ES	1000	D-041-03
	D-041-05	Parsons ES	2000	
	D-041-06	Parsons ES	1700	
	D-041-07	Parsons ES	340	
	D-041-08	Parsons ES	410	
	D-041-09	Parsons ES	1500	
	D-041-10	Parsons ES	3200	
	D-041-11	Parsons ES	1300	
	D-041-12	Parsons ES	300	D-041-13
	D-041-13	Parsons ES	350	D-041-12
	D-041-14	Parsons ES	400	
	D-041-15	Parsons ES	460	
	D-041-16	Parsons ES	480	
Dripline Samples	C-041-01	Parsons ES	280(c)	
	C-041-02	Parsons ES	280(c)	
	C-041-03	Parsons ES	280(c)	
	C-041-04	Parsons ES	280(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese mnfdbase (ms access)

Table A-042 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No. 042

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-042-01	Parsons ES	180	
	D-042-09	Parsons ES	350	
Dripline Samples	C-042-1	Parsons ES	310(c)	
	C-042-2	Parsons ES	310(c)	
	C-042-3	Parsons ES	310(c)	
	C-042-4	Parsons ES	310(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-043 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.043

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-043-01	Parsons ES	250	
	D-043-02	Parsons ES	310	
	D-043-03	Parsons ES	97	
	D-043-08	Parsons ES	220	D-043-09
	D-043-09	Parsons ES	220	D-043-08
Dripline Samples	C-043-02	Parsons ES	250(c)	
	C-043-03	Parsons ES	250(c)	
	C-043-04	Parsons ES	250(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese mnfcbase (ms access)

Table A-044 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.044

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-044-01	Parsons ES	60	
	D-044-02	Parsons ES	83	
	D-044-03	Parsons ES	71	D-044-04
	D-044-04	Parsons ES	69	D-044-03
	D-044-05	Parsons ES	120	
	D-044-06	Parsons ES	120	
	D-044-09	Parsons ES	76	
	D-044-10	Parsons ES	57	
	D-044-11	Parsons ES	69	D-044-15
	D-044-12	Parsons ES	130	
	D-044-15	Parsons ES	72	D-044-11
Dripline Samples	C-044-01	Parsons ES	130(c)	
	C-044-02	Parsons ES	130(c)	
	C-044-03	Parsons ES	130(c)	
	C-044-04	Parsons ES	130(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese:mhfdbase (ms access)

Table A-045 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.045

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-045-01	Parsons ES	660	D-045-02
	D-045-02	Parsons ES	830	D-045-01
	D-045-03	Parsons ES	660	
	D-045-04	Parsons ES	760	
	D-045-05	Parsons ES	1200	
	D-045-06	Parsons ES	1200	
	D-045-07	Parsons ES	230	
	D-045-08	Parsons ES	840	
	D-045-09	Parsons ES	1000	
	D-045-10	Parsons ES	560	
	D-045-11	Parsons ES	2800	
	D-045-12	Parsons ES	480	D-045-13
	D-045-13	Parsons ES	450	D-045-12
	D-045-14	Parsons ES	1100	
	D-045-15	Parsons ES	610	
Dripline Samples	C-045-01	Parsons ES	780(c)	
	C-045-02	Parsons ES	780(c)	
	C-045-03	Parsons ES	780(c)	
	C-045-04	Parsons ES	780(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-046 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No. 046

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-046-01	Parsons ES	1800	
	D-046-02	Parsons ES	460	
	D-046-03	Parsons ES	1100	
	D-046-07	Parsons ES	700	D-046-08
	D-046-08	Parsons ES	810	D-046-07
	D-046-13	Parsons ES	670	
	D-046-14	Parsons ES	250	
	D-046-15	Parsons ES	650	
	D-046-16	Parsons ES	820	
	D-046-17	Parsons ES	640	D-046-18
	D-046-18	Parsons ES	480	D-046-17
Dripline Samples	C-046-01	Parsons ES	1700(c)	
	C-046-02	Parsons ES	1700(c)	
	C-046-03	Parsons ES	1700(c)	
	C-046-04	Parsons ES	1700(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-047 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.047

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	SS-165	EPA	601	
	SS-167	EPA	1145	
	SS-220	EPA	453	
	D-047-01	Parsons ES	470	
	D-047-02	Parsons ES	400	
	D-047-03	Parsons ES	1400	
	D-047-04	Parsons ES	1200	
	D-047-05	Parsons ES	1400	D-047-06
	D-047-06	Parsons ES	1100	D-047-05
	D-047-07	Parsons ES	310	
	D-047-08	Parsons ES	790	
	D-047-09	Parsons ES	3300	
	D-047-10	Parsons ES	750	
	D-047-11	Parsons ES	1000	
	D-047-13	Parsons ES	1800	
	D-047-14	Parsons ES	340	
	D-047-15	Parsons ES	510	D-047-16
	D-047-16	Parsons ES	630	D-047-15
Dripline Samples	SS-164	EPA	409	
	SS-166	EPA	728	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-048 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.048

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	SS-86	EPA	361	
	SS-87	EPA	795	
	SS-89	EPA	522	
	SS-91	EPA	1078	
	SS-93	EPA	1043	
	D-048-01	Parsons ES	450	D-048-02
	D-048-02	Parsons ES	560	D-048-01
	D-048-03	Parsons ES	750	
	D-048-04	Parsons ES	2500	
	D-048-05	Parsons ES	940	
	D-048-06	Parsons ES	1500	
	D-048-07	Parsons ES	1200	
	D-048-08	Parsons ES	400	
	D-048-09	Parsons ES	400	
	D-048-10	Parsons ES	270	
	D-048-11	Parsons ES	680	
	D-048-12	Parsons ES	4800	
	D-048-13	Parsons ES	500	D-048-14
	D-048-14	Parsons ES	570	D-048-13
	D-048-15	Parsons ES	2100	
	D-048-16	Parsons ES	790	
	D-048-17	Parsons ES	840	
Dripline Samples	SS-88	EPA	362	
	SS-90	EPA	2172	
	SS-92	EPA	785	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-049 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No. 049

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	VCP-S-683	EPA	459	
Dripline Samples	VCP-S-680	EPA	249	
	VCP-S-681	EPA	768	
	VCP-S-682	EPA	673	
	VCP-S-684	EPA	1014	
	VCP-S-685	EPA	1015	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-050 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.050

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-050-01	Parsons ES	290	
	D-050-02	Parsons ES	290	D-050-03
	D-050-03	Parsons ES	220	D-050-02
	D-050-04	Parsons ES	410	
	D-050-06	Parsons ES	740	
	D-050-07	Parsons ES	390	
	D-050-08	Parsons ES	630	
Dripline Samples	C-050-01	Parsons ES	440(c)	
	C-050-03	Parsons ES	440(c)	
	C-050-04	Parsons ES	440(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese:mhldbase (ms access)

Table A-051 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.051

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-051-01	Parsons ES	130	
	D-051-02	Parsons ES	110	
	D-051-03	Parsons ES	260	
	D-051-04	Parsons ES	2500	D-051-05
	D-051-05	Parsons ES	1500	D-051-04
	D-051-06	Parsons ES	160	
	D-051-07	Parsons ES	210	
	D-051-08	Parsons ES	150	
	D-051-10	Parsons ES	200	D-051-11
	D-051-11	Parsons ES	250	D-051-10
	D-051-12	Parsons ES	160	
	D-051-14	Parsons ES	160	
	D-051-15	Parsons ES	180	
	D-051-16	Parsons ES	290	
Dripline Samples	C-051-02	Parsons ES	490(c)	
	C-051-03	Parsons ES	490(c)	
	C-051-04	Parsons ES	490(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese.mhfdbase (ms access)

Table A-052 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.052

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-052-01	Parsons ES	430	
	D-052-02	Parsons ES	580	D-052-03
	D-052-03	Parsons ES	440	D-052-02
	D-052-04	Parsons ES	970	
	D-052-05	Parsons ES	900	
	D-052-06	Parsons ES	380	
	D-052-07	Parsons ES	430	
	D-052-08	Parsons ES	380	
	D-052-09	Parsons ES	850	
	D-052-10	Parsons ES	410	
	D-052-11	Parsons ES	520	D-052-12
	D-052-12	Parsons ES	360	D-052-11
	D-052-13	Parsons ES	410	
	D-052-14	Parsons ES	660	
	D-052-15	Parsons ES	840	
	D-052-16	Parsons ES	510	
	D-052-17	Parsons ES	630	
Dripline Samples	C-052-01	Parsons ES	650(c)	
	C-052-02	Parsons ES	650(c)	
	C-052-03	Parsons ES	650(c)	
	C-052-04	Parsons ES	650(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese mnfcbase (ms access)

Table A-053 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.053

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-053-01	Parsons ES	560	
	D-053-02	Parsons ES	310	
	D-053-03	Parsons ES	430	
	D-053-04	Parsons ES	650	
	D-053-05	Parsons ES	440	D-053-06
	D-053-06	Parsons ES	460	D-053-05
	D-053-08	Parsons ES	410	
	D-053-09	Parsons ES	350	
	D-053-10	Parsons ES	410	
	D-053-11	Parsons ES	1300	
	D-053-12	Parsons ES	500	
	D-053-13	Parsons ES	450	D-053-14
	D-053-14	Parsons ES	490	D-053-13
Dripline Samples	C-053-01	Parsons ES	430(c)	
	C-053-02	Parsons ES	430(c)	
	C-053-03	Parsons ES	430(c)	
	C-053-04	Parsons ES	430(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese:mhfcbase (ms access)

Table A-055 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.055

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-055-01	Parsons ES	550	
	D-055-02	Parsons ES	380	
	D-055-03	Parsons ES	<60	
	D-055-04	Parsons ES	<61	D-055-05
	D-055-05	Parsons ES	<62	D-055-04
	D-055-06	Parsons ES	210	
	D-055-07	Parsons ES	<60	
	D-055-08	Parsons ES	290	
	D-055-09	Parsons ES	530	
	D-055-10	Parsons ES	170	
	D-055-11	Parsons ES	<58	
	D-055-12	Parsons ES	120	D-055-13
	D-055-13	Parsons ES	59	D-055-12
	D-055-15	Parsons ES	660	
	D-055-16	Parsons ES	270	
	D-055-17	Parsons ES	460	
Dripline Samples	C-055-02	Parsons ES	620(c)	
	C-055-03	Parsons ES	620(c)	
	C-055-04	Parsons ES	620(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese:mhfdbase (ms access)

Table A-056 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.056

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	VCP-S-61	EPA	489	
	VCP-S-63	EPA	796	
	VCP-S-65	EPA	768	
	D-056-01	Parsons ES	390	
	D-056-02	Parsons ES	270	D-056-08
	D-056-04	Parsons ES	840	
	D-056-05	Parsons ES	750	
	D-056-06	Parsons ES	320	
	D-056-07	Parsons ES	400	
	D-056-08	Parsons ES	300	D-056-02
	D-056-09	Parsons ES	720	
	D-056-10	Parsons ES	330	
	D-056-11	Parsons ES	730	D-056-12
	D-056-12	Parsons ES	670	D-056-11
	D-056-13	Parsons ES	520	
Dripline Samples	VCP-S-62	EPA	1908	
	VCP-S-64	EPA	593	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-057 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.057

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-057-01	Parsons ES	410	
	D-057-02	Parsons ES	430	
	D-057-03	Parsons ES	440	
	D-057-04	Parsons ES	490	D-057-05
	D-057-05	Parsons ES	420	D-057-04
	D-057-06	Parsons ES	330	
	D-057-07	Parsons ES	160	
	D-057-08	Parsons ES	490	
	D-057-09	Parsons ES	370	
	D-057-10	Parsons ES	340	
	D-057-11	Parsons ES	400	
Dripline Samples	C-057-01	Parsons ES	440(c)	
	C-057-02	Parsons ES	440(c)	
	C-057-03	Parsons ES	440(c)	
	C-057-04	Parsons ES	440(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese:mhicbase (ms access)

Table A-058 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.058

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-058-01	Parsons ES	530	
	D-058-02	Parsons ES	460	
	D-058-03	Parsons ES	410	
	D-058-04	Parsons ES	500	
	D-058-05	Parsons ES	380	
	D-058-06	Parsons ES	430	
	D-058-07	Parsons ES	450	D-058-08
	D-058-08	Parsons ES	480	D-058-07
	D-058-09	Parsons ES	410	
	D-058-11	Parsons ES	620	
	D-058-12	Parsons ES	1000	
	D-058-13	Parsons ES	610	
	D-058-14	Parsons ES	620	
	D-058-15	Parsons ES	1600	
	D-058-16	Parsons ES	510	
Dripline Samples	C-058-01	Parsons ES	565(c)	
	C-058-02	Parsons ES	565(c)	
	C-058-03	Parsons ES	565(c)	
	C-058-04	Parsons ES	565(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese.mhfdbase (ms access)

Table A-059 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.059

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-059-01	Parsons ES	520	
	D-059-02	Parsons ES	530	
	D-059-03	Parsons ES	730	D-059-04
	D-059-04	Parsons ES	530	D-059-03
	D-059-05	Parsons ES	830	
	D-059-07	Parsons ES	450	
	D-059-08	Parsons ES	230	
	D-059-09	Parsons ES	440	
	D-059-10	Parsons ES	140	
	D-059-11	Parsons ES	300	
	D-059-12	Parsons ES	630	
	D-059-13	Parsons ES	390	
	D-059-14	Parsons ES	450	
	D-059-15	Parsons ES	230	
	D-059-16	Parsons ES	310	
	D-059-17	Parsons ES	320	D-059-18
	D-059-18	Parsons ES	310	D-059-17
Dripline Samples	C-059-01	Parsons ES	180(c)	
	C-059-02	Parsons ES	180(c)	
	C-059-03	Parsons ES	180(c)	
	C-059-04	Parsons ES	180(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-060 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.060

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-060-01	Parsons ES	620	
	D-060-02	Parsons ES	710	D-060-03
	D-060-03	Parsons ES	780	D-060-02
	D-060-05	Parsons ES	1600	
	D-060-06	Parsons ES	600	
	D-060-07	Parsons ES	490	
	D-060-08	Parsons ES	730	
Dripline Samples	C-060-01	Parsons ES	650(c)	
	C-060-02	Parsons ES	650(c)	
	C-060-03	Parsons ES	650(c)	
	C-060-04	Parsons ES	650(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese:mnfdbase (ms access)

Table A-061 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No. 061

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-061-01	Parsons ES	266	D-061-02
	D-061-02	Parsons ES	365	D-061-01
	D-061-03	Parsons ES	687	
	D-061-04	Parsons ES	456	
	D-061-05	Parsons ES	807	
	D-061-06	Parsons ES	503	
	D-061-07	Parsons ES	429	
	D-061-08	Parsons ES	445	
	D-061-09	Parsons ES	550	
	D-061-10	Parsons ES	366	
	D-061-11	Parsons ES	1630	
	D-061-12	Parsons ES	350	
	D-061-13	Parsons ES	1300	
	D-061-14	Parsons ES	490	
	D-061-15	Parsons ES	800	
	D-061-16	Parsons ES	450	
	D-061-17	Parsons ES	730	
	D-061-18	Parsons ES	740	
	D-061-19	Parsons ES	980	D-061-21
	D-061-20	Parsons ES	430	
	D-061-21	Parsons ES	970	D-061-19
	D-061-22	Parsons ES	410	
	D-061-23	Parsons ES	370	
Dripline Samples	C-061-01	Parsons ES	1500 (C)	
	C-061-02	Parsons ES	1500 (C)	
	C-061-03	Parsons ES	1500 (C)	
	C-061-04	Parsons ES	1500 (C)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhtdbase (ms access)

Table A-062 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.062

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-062-01	Parsons ES	420	
	D-062-02	Parsons ES	520	D-062-03
	D-062-03	Parsons ES	500	D-062-02
	D-062-04	Parsons ES	610	
	D-062-05	Parsons ES	600	
	D-062-06	Parsons ES	1000	
	D-062-07	Parsons ES	530	
	D-062-08	Parsons ES	1300	
Dripline Samples	C-062-01	Parsons ES	520(c)	
	C-062-02	Parsons ES	520(c)	
	C-062-03	Parsons ES	520(c)	
	C-062-04	Parsons ES	520(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese:mhfdbase (ms access)

Table A-063 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.063

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-063-01	Parsons ES	1300	
	D-063-02	Parsons ES	1500	
	D-063-03	Parsons ES	920	D-063-04
	D-063-04	Parsons ES	910	D-063-03
	D-063-05	Parsons ES	580	
	D-063-06	Parsons ES	530	
	D-063-07	Parsons ES	560	
	D-063-08	Parsons ES	2700	
	D-063-09	Parsons ES	400	
	D-063-10	Parsons ES	990	
	D-063-11	Parsons ES	1300	
	D-063-12	Parsons ES	430	D-063-13
	D-063-13	Parsons ES	430	D-063-12
Dripline Samples	C-063-01	Parsons ES	430(c)	
	C-063-03	Parsons ES	430(c)	
	C-063-04	Parsons ES	430(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese:mnfdbase (ms access)

Table A-064 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.064

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	VCP-S-536	EPA	781	
	VCP-S-537	EPA	840	
	VCP-S-539	EPA	258	
	VCP-S-540	EPA	1967	
	D-064-01	Parsons ES	420	
	D-064-02	Parsons ES	270	
	D-064-04	Parsons ES	570	
	D-064-05	Parsons ES	380	D-064-06
	D-064-06	Parsons ES	400	D-064-05
	D-064-07	Parsons ES	320	
Dripline Samples	VCP-S-538	EPA	680	
	VCP-S-541	EPA	771	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese:mnfdbase (ms access)

Table A-065 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.065

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	VCP-S-506	EPA	321	
	VCP-S-507	EPA	406	
	VCP-S-508	EPA	749	
	VCP-S-509	EPA	1888	
	D-065-01	Parsons ES	1500	
	D-065-02	Parsons ES	940	
	D-065-03	Parsons ES	590	
	D-065-04	Parsons ES	350	
	D-065-13	Parsons ES	490	D-065-14
	D-065-14	Parsons ES	530	D-065-13
Dripline Samples	C-065-02	Parsons ES	1800(c)	
	C-065-03	Parsons ES	1800(c)	
	C-065-04	Parsons ES	1800(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese.mhldbase (ms access)

Table A-066 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.066

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	VCP-S-408	EPA	259	
	VCP-S-409	EPA	225	
	VCP-S-410	EPA	238	
	VCP-S-411	EPA	211	
	VCP-S-413	EPA	461	
	VCP-S-414	EPA	612	
	VCP-S-416	EPA	782	
	D-066-01	Parsons ES	250	D-066-02
	D-066-02	Parsons ES	290	D-066-01
	D-066-03	Parsons ES	220	
	D-066-04	Parsons ES	530	
	D-066-05	Parsons ES	680	
	D-066-06	Parsons ES	360	
Dripline Samples	VCP-S-412	EPA	1663	
	VCP-S-415	EPA	1251	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdesevmfdbase (ms access)

Table A-067 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.067

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	VCP-S-510	EPA	378	
	VCP-S-511	EPA	459	
	VCP-S-512	EPA	461	
	VCP-S-513	EPA	1331	
	VCP-S-514	EPA	496	
	VCP-S-515	EPA	385	
	VCP-S-516	EPA	634	
	VCP-S-517	EPA	268	
	D-067-01	Parsons ES	1000	
	D-067-02	Parsons ES	450	
	D-067-03	Parsons ES	510	
	D-067-04	Parsons ES	590	
	D-067-05	Parsons ES	850	D-067-06
	D-067-06	Parsons ES	850	D-067-05
	D-067-07	Parsons ES	700	
	D-067-08	Parsons ES	490	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

Table A-068 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No. 068

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	VCP-S-518	EPA	296	
	VCP-S-519	EPA	372	
	VCP-S-520	EPA	375	
	VCP-S-521	EPA	251	
	VCP-S-522	EPA	2378	
	VCP-S-523	EPA	1793	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-069 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No. 069

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	VCP-S-662	EPA	671	
	VCP-S-663	EPA	530	
	VCP-S-664	EPA	498	
	VCP-S-665	EPA	580	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-070 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.070

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-070-01	Parsons ES	200	
	D-070-02	Parsons ES	360	
	D-070-03	Parsons ES	520	D-070-04
	D-070-04	Parsons ES	500	D-070-03
	D-070-07	Parsons ES	420	
	D-070-08	Parsons ES	820	
	D-070-09	Parsons ES	720	
	D-070-10	Parsons ES	940	
Dripline Samples	C-070-01	Parsons ES	500(c)	
	C-070-02	Parsons ES	500(c)	
	C-070-03	Parsons ES	500(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-071 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.071

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	VCP-S-206	EPA	350	
	VCP-S-209	EPA	527	
	VCP-S-210	EPA	427	
	VCP-S-211	EPA	744	
	VCP-S-212	EPA	638	
	D-071-01	Parsons ES	240	
	D-071-02	Parsons ES	420	
	D-071-03	Parsons ES	450	D-071-04
	D-071-04	Parsons ES	470	D-071-03
	D-071-05	Parsons ES	620	
	D-071-06	Parsons ES	870	
	D-071-07	Parsons ES	480	
	D-071-08	Parsons ES	750	
Dripline Samples	VCP-S-207	EPA	690	
	VCP-S-208	EPA	844	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-072 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.072

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	SS-157	EPA	865	
	SS-159	EPA	537	
	D-072-01	Parsons ES	500	
	D-072-02	Parsons ES	910	
	D-072-03	Parsons ES	390	
	D-072-04	Parsons ES	190	D-072-05
	D-072-05	Parsons ES	190	D-072-04
	D-072-07	Parsons ES	500	
Dripline Samples	SS-156	EPA	396	
	SS-158	EPA	607	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-073 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.073

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	SS-208	EPA	709	
	SS-43	EPA	406	
	SS-45	EPA	645	
	D-073-01	Parsons ES	1400	
	D-073-02	Parsons ES	680	
	D-073-03	Parsons ES	340	D-073-04
	D-073-04	Parsons ES	330	D-073-03
	D-073-05	Parsons ES	530	
	D-073-06	Parsons ES	820	
	D-073-07	Parsons ES	360	
	D-073-08	Parsons ES	430	
	D-073-09	Parsons ES	460	
	D-073-11	Parsons ES	300	D-073-12
	D-073-12	Parsons ES	350	D-073-11
	D-073-15	Parsons ES	360	
	D-073-16	Parsons ES	360	
Dripline Samples	SS-42	EPA	637	
	SS-44	EPA	1209	
	SS-46	EPA	1489	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese:mhfdbase (ms access)

Table A-074 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.074

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	SS-36	EPA	702	
	SS-37	EPA	821	
	SS-39	EPA	1928	
	SS-41	EPA	449	
	D-074-01	Parsons ES	940	
	D-074-02	Parsons ES	1100	
	D-074-03	Parsons ES	520	
	D-074-04	Parsons ES	1200	
	D-074-05	Parsons ES	500	D-074-06
	D-074-06	Parsons ES	610	D-074-05
	D-074-10	Parsons ES	890	
	D-074-12	Parsons ES	320	
	D-074-13	Parsons ES	500	
	D-074-15	Parsons ES	590	D-074-16
	D-074-16	Parsons ES	710	D-074-15
Dripline Samples	SS-207	EPA	656	
	SS-38	EPA	458	
	SS-40	EPA	1016	
	C-074-01	Parsons ES	850(c)	
	C-074-02	Parsons ES	850(c)	
	C-074-03	Parsons ES	850(c)	
	C-074-04	Parsons ES	850(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-075 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.075

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	BH-4-S	EPA	754	
	SG-31	EPA	2978	
	SG-5	EPA	766	
	SG-7	EPA	483	
	SS-131	EPA	947	
	SS-133	EPA	918	
	D-075-01	Parsons ES	490	
	D-075-02	Parsons ES	430	
	D-075-03	Parsons ES	760	D-075-04
	D-075-04	Parsons ES	660	D-075-03
	D-075-05	Parsons ES	590	
Dripline Samples	SG-6	EPA	715	
	SS-130	EPA	490	
	SS-132	EPA	773	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-076 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No. 076

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	BH-35-S	EPA	1045	
	SG-11	EPA	208	
	SG-33	EPA	578	
	SG-36	EPA	563	
	D-076-01	Parsons ES	890	
	D-076-03	Parsons ES	540	
	D-076-04	Parsons ES	590	
	D-076-05	Parsons ES	1200	D-076-06
	D-076-06	Parsons ES	820	D-076-05
	D-076-07	Parsons ES	370	
	D-076-08	Parsons ES	420	
	D-076-09	Parsons ES	400	
	D-076-10	Parsons ES	390	
	D-076-12	Parsons ES	620	D-076-13
	D-076-13	Parsons ES	770	D-076-12
Dripline Samples	SG-32	EPA	1324	
	SG-37	EPA	517	
	D-076-02	Parsons ES	680	
	D-076-11	Parsons ES	630	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\vmhfdbase (ms access)

Table A-077 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.077

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	VCP-S-1	EPA	528	
	VCP-S-2	EPA	1688	
	VCP-S-3	EPA	459	
	VCP-S-4	EPA	475	
	VCP-S-5	EPA	685	
	VCP-S-8	EPA	420	
	D-077-01	Parsons ES	610	
	D-077-02	Parsons ES	340	
	D-077-03	Parsons ES	520	
	D-077-04	Parsons ES	430	
	D-077-05	Parsons ES	300	
	D-077-06	Parsons ES	370	
	D-077-07	Parsons ES	200	
	D-077-08	Parsons ES	330	D-077-09
	D-077-09	Parsons ES	340	D-077-08
	D-077-10	Parsons ES	750	
	D-077-11	Parsons ES	360	
	D-077-12	Parsons ES	350	
	D-077-13	Parsons ES	960	
	D-077-14	Parsons ES	870	
	D-077-15	Parsons ES	1300	D-077-16
	D-077-16	Parsons ES	1700	D-077-15
Dripline Samples	VCP-S-6	EPA	877	
	VCP-S-7	EPA	479	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese:mhfdbase (ms access)

Table A-078 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.078

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-078-01	Parsons ES	510	
	D-078-02	Parsons ES	500	
	D-078-03	Parsons ES	280	
	D-078-04	Parsons ES	330	
	D-078-05	Parsons ES	300	D-078-06
	D-078-06	Parsons ES	280	D-078-05
	D-078-07	Parsons ES	240	
	D-078-08	Parsons ES	360	
Dripline Samples	C-078-01	Parsons ES	480(c)	
	C-078-02	Parsons ES	480(c)	
	C-078-03	Parsons ES	480(c)	
	C-078-04	Parsons ES	480(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-079 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.079

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-079-01	Parsons ES	550	
	D-079-02	Parsons ES	370	D-079-03
	D-079-03	Parsons ES	270	D-079-02
	D-079-04	Parsons ES	580	
	D-079-05	Parsons ES	760	
	D-079-06	Parsons ES	700	
	D-079-07	Parsons ES	500	
Dripline Samples	C-079-01	Parsons ES	980(c)	
	C-079-02	Parsons ES	980(c)	
	C-079-03	Parsons ES	980(c)	
	C-079-04	Parsons ES	980(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-080 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No. 080

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	VCP-S-445	EPA	829	
	VCP-S-446	EPA	773	
	VCP-S-447	EPA	1081	
	D-080-01	Parsons ES	350	
	D-080-02	Parsons ES	230	
	D-080-04	Parsons ES	530	
	D-080-05	Parsons ES	640	
	D-080-06	Parsons ES	520	
	D-080-09	Parsons ES	380	
Dripline Samples	VCP-S-443	EPA	436	
	VCP-S-444	EPA	676	
	VCP-S-448	EPA	411	
	VCP-S-449	EPA	2287	
	VCP-S-450	EPA	445	
	C-080-01	Parsons ES	1100(c)	
	C-080-02	Parsons ES	1100(c)	
	C-080-03	Parsons ES	1100(c)	
	C-080-04	Parsons ES	1100(c)	
	D-080-03	Parsons ES	670	
	D-080-07	Parsons ES	640	D-080-08
	D-080-08	Parsons ES	780	D-080-07

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

Table A-082 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.082

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-082-01	Parsons ES	270	
	D-082-02	Parsons ES	390	
	D-082-03	Parsons ES	400	
	D-082-04	Parsons ES	280	
	D-082-05	Parsons ES	230	
	D-082-06	Parsons ES	520	
	D-082-07	Parsons ES	300	D-082-08
	D-082-08	Parsons ES	270	D-082-07
	D-082-09	Parsons ES	230	
	D-082-10	Parsons ES	550	
Dripline Samples	C-082-01	Parsons ES	330(c)	
	C-082-02	Parsons ES	330(c)	
	C-082-03	Parsons ES	330(c)	
	C-082-04	Parsons ES	330(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese.mhfdbase (ms access)

Table A-083 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.083

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-083-01	Parsons ES	160	
	D-083-02	Parsons ES	460	
	D-083-03	Parsons ES	190	
	D-083-04	Parsons ES	340	
	D-083-05	Parsons ES	270	
	D-083-06	Parsons ES	160	D-083-07
	D-083-07	Parsons ES	110	D-083-06
	D-083-08	Parsons ES	480	
	D-083-09	Parsons ES	270	
	D-083-10	Parsons ES	460	
Dripline Samples	C-083-01	Parsons ES	280(c)	
	C-083-02	Parsons ES	280(c)	
	C-083-03	Parsons ES	280(c)	
	C-083-04	Parsons ES	280(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese:mhfdbase (ms access)

Table A-084 -1

Verdese Carter Park Project
AlliedSignal, Inc.
Delineation Sample Results

Parcel No.084

	Sample ID*	Sample Collected By	Lead Concentration (mg/kg)	Duplicate Sample Number
Yard Samples	D-084-01	Parsons ES	610	D-084-02
	D-084-02	Parsons ES	750	D-084-01
	D-084-03	Parsons ES	640	
	D-084-04	Parsons ES	310	
	D-084-05	Parsons ES	340	D-084-06
	D-084-06	Parsons ES	270	D-084-05
	D-084-07	Parsons ES	1900	
	D-084-08	Parsons ES	460	
	D-084-09	Parsons ES	1700	
	D-084-10	Parsons ES	160	
	D-084-11	Parsons ES	1100	
	D-084-12	Parsons ES	510	
	D-084-13	Parsons ES	270	
	D-084-14	Parsons ES	430	
	D-084-15	Parsons ES	340	D-084-16
	D-084-16	Parsons ES	480	D-084-15
	D-084-17	Parsons ES	120	
	D-084-18	Parsons ES	160	
	D-084-19	Parsons ES	210	
	D-084-20	Parsons ES	270	
	D-084-21	Parsons ES	910	
Dripline Samples	C-084-01	Parsons ES	1000(c)	
	C-084-02	Parsons ES	1000(c)	
	C-084-03	Parsons ES	1000(c)	
	C-084-04	Parsons ES	1000(c)	

<60 - Indicates lead was not detected above the method detection limit of 60 mg/kg.

* All soil samples with the format "C-0XX-YY" ("0XX" is the parcel number and "YY" is the sample number) are composite samples collected within the dripline of buildings on the property.

verdese\mhfdbase (ms access)

APPENDIX B

ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY FORMS

NOTE:

This Appendix contains the final laboratory reports and an associated table, which was issued by the laboratory (Forensic Analytical) and signed by the Laboratory Supervisor. The final laboratory reports report the results as Wet Weight. The table presents the analytical results as Wet Weight and as Dry Weight in milligrams per kilogram (mg/kg). Please also note the table includes samples that are not discussed in this report.

Forensic Analytical

Final Report Summary

Metals Analysis of Soils

RECEIVED DEC 17 1999 PARSONS ENGINEERING SCIENCE, INC. OAKLAND

Parsons Engineering Science Inc
David Diamond
2101 Webster, Suite 700
Oakland, CA 94612

Client ID = 3812

Job ID 732483

						Soil Analysis				
Report Number	Client Sample ID	Lab ID Number	Element	Result (Wet Wt.)	Result (Dry Wt.)	Result Units	Reporting Limit (mg/kg)	Moisture %	Date Analyzed	Comment/ Qualifier
M028449	W04701/02/06/07	39913645	Pb	120	140	mg/kg	5	16.08 *	05/24/99	R (MS/MSD not available)
M028449	W04703/04/05/08	39913646	Pb	450	540	mg/kg	30	16.08 *	05/24/99	R (MS/MSD not available)
M028453	W06301/03/05/08	39913654	Pb	520	620	mg/kg	30	16.08 *	05/24/99	R (MS/MSD not available)
M028453	W06302/04/06	39913655	Pb	240	280	mg/kg	6	16.08 *	05/24/99	R (MS/MSD not available)
M028456	WC4801/02/04/08	39913660	Pb	350	410	mg/kg	30	16.08 *	05/24/99	R (MS/MSD not available)
M028456	W04803/05/06/07	39913661	Pb	490	580	mg/kg	30	16.08 *	05/24/99	R (MS/MSD not available)
M028459	W04501/03/04/08	39913666	Pb	390	470	mg/kg	30	16.08 *	05/24/99	R (MS/MSD not available)
M028459	W04502/05/06/07	39913667	Pb	420	500	mg/kg	30	16.08 *	05/24/99	R (MS/MSD not available)
M028462	W04102/03/07/08	39913672	Pb	840	1000	mg/kg	30	16.08 *	05/24/99	R (MS/MSD not available)
* = % moisture was calculated by averaging all other samples and using average + 3 standard deviations.										
M029774	W07501/02/03/04	39921705	Pb	440	470	mg/kg	6	6.99	07/30/99	
M029778	W060010408	39921720	Pb	810	890	mg/kg	6	8.92	07/30/99	
M029778	W06002050607	39921721	Pb	750	830	mg/kg	6	9.48	07/30/99	
M029782	W03402030408	39921729	Pb	330	370	mg/kg	6	8.43	07/30/99	
M029782	W03401050607	39921730	Pb	500	540	mg/kg	6	7.45	07/30/99	
M029785	W07401020304	39921735	Pb	770	810	mg/kg	6	5.98	07/30/99	
M029788	W-042-01	39921738	Pb	290	320	mg/kg	6	10.18	07/30/99	
M029788	W-042-02	39921739	Pb	560	600	mg/kg	6	6.65	07/30/99	
M029788	W-042-05	39921740	Pb	92	110	mg/kg	6	18.32	07/30/99	
M029791	D-042-01	39921747	Pb	160	180	mg/kg	6	11.76	07/30/99	
M029791	C-042	39921748	Pb	250	310	mg/kg	6	21.24	07/30/99	

3777 Depot Road, Suite 409, Hayward, California 94545-2761 * Telephone: 150/887-8828 800/824-FASI Fax: 510/887/4218

Report Number	Client Sample ID	Lab ID Number	Element	Result (Wet Wt.)	Result (Dry Wt.)	Result Units	Reporting Limit (mg/kg)	Moisture %	Date Analyzed	Comment/ Qualifier
M029791	D-042-09	39921749	Pb	330	350	mg/kg	6	6.67	07/30/99	
M029940	W03901020308	39922286	Pb	1300	1400	mg/kg	20	9.17	08/14/99	J (CCV)- See re-run below
M029940	W039040607	39922287	Pb	570	670	mg/kg	20	13.73	08/14/99	J (CCV)- See re-run below
M030045	W04602050704	39922699	Pb	1000	1000	mg/kg	20	4.74	08/22/99	
M030048	C-046	39922702	Pb	1600	1700	mg/kg	20	7.54	08/22/99	
M030048	D-046-01	39922703	Pb	1500	1800	mg/kg	20	14.41	08/22/99	
M030048	D-046-02	39922704	Pb	430	460	mg/kg	20	8.03	08/22/99	
M030048	D-046-16	39922705	Pb	760	820	mg/kg	20	7.04	08/22/99	
M030048	D-046-14	39922706	Pb	230	250	mg/kg	20	6.29	08/22/99	
M030048	D-046-15	39922707	Pb	610	650	mg/kg	20	5.43	08/22/99	
M030048	D-046-07	39922708	Pb	660	700	mg/kg	20	5.49	08/22/99	
M030048	D-046-08	39922709	Pb	740	810	mg/kg	20	7.93	08/22/99	
M030048	D-046-17	39922710	Pb	580	640	mg/kg	20	9.45	08/22/99	
M030048	D-046-18	39922711	Pb	450	480	mg/kg	20	5.97	08/22/99	
M030048	D-046-13	39922712	Pb	630	670	mg/kg	20	6.59	08/22/99	
M030048	D-046-03	39922713	Pb	930	1100	mg/kg	20	11.90	08/22/99	
M030338	C-048-01	39923990	Pb	28	30	mg/kg	20	5.26	09/01/99	J (ICS)- See re-run below
M030338	C-048-02	39923991	Pb	54	59	*mg/kg	20	8.37	09/01/99	J (ICS)- See re-run below
M030338	C-048-03	39923992	Pb	330	350	mg/kg	20	6.05	09/01/99	J (ICS)- See re-run below
M030338	C-048-04	39923993	Pb	240	260	mg/kg	20	8.85	09/01/99	J (ICS)- See re-run below
M030338	C-048-05	39923994	Pb	430	520	mg/kg	20	16.87	09/01/99	J (ICS)- See re-run below
M030338	C-048-06	39923995	Pb	82	91	mg/kg	20	9.73	09/01/99	J (ICS)- See re-run below
M030338	C-048-07	39923996	Pb	270	290	mg/kg	20	6.46	09/01/99	J (ICS)- See re-run below
M030338	C-048-08	39923997	Pb	110	110	mg/kg	20	5.59	09/01/99	J (ICS)- See re-run below
M030338	C-048-09	39923998	Pb	240	270	mg/kg	20	9.90	09/01/99	J (ICS)- See re-run below
M030338	C-048-10	39923999	Pb	58	67	mg/kg	20	13.86	09/01/99	J (ICS)- See re-run below
M030338	C-048-11	39924000	Pb	100	120	mg/kg	20	10.71	09/01/99	J (ICS)- See re-run below
M030338	C-048-12	39924001	Pb	170	180	mg/kg	20	6.35	09/01/99	J (ICS)- See re-run below
M030338	C-048-13	39924002	Pb	60	68	mg/kg	20	11.90	09/01/99	J (ICS)- See re-run below
M030338	C-048-14	39924003	Pb	98	110	mg/kg	20	9.04	09/01/99	J (ICS)- See re-run below
M030338	C-048-15	39924004	Pb	45	47	mg/kg	20	5.37	09/01/99	J (ICS)- See re-run below
M030338	C-048-16	39924005	Pb	42	48	mg/kg	20	12.72	09/01/99	J (ICS)- See re-run below
M030338	C-048-17	39924006	Pb	77	83	mg/kg	20	7.88	09/01/99	J (ICS)- See re-run below
M030338	C-048-25	39924007	Pb	550	630	mg/kg	20	12.23	09/01/99	J (ICS)- See re-run below
M030338	C-048-18	39924008	Pb	520	550	mg/kg	20	5.05	09/01/99	J (ICS)- See re-run below

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Report Number	Client Sample ID	Lab ID Number	Element	Result (Wet Wt.)	Result (Dry Wt.)	Result Units	Reporting Limit (mg/kg)	Moisture %	Date Analyzed	Comment/ Qualifier
M030338	C-048-19	39924009	Pb	550	570	mg/kg	20	2.43	09/01/99	J (ICS)- See re-run below
M030338	C-048-20	39924010	Pb	700	730	mg/kg	20	3.74	09/01/99	J (ICS)- See re-run below
M030338	C-048-21	39924011	Pb	140	160	mg/kg	20	9.83	09/01/99	J (ICS)- See re-run below
M030338	C-048-22	39924012	Pb	490	500	mg/kg	20	3.13	09/01/99	J (ICS)- See re-run below
M030338	C-048-23	39924013	Pb	710	740	mg/kg	20	4.29	09/01/99	J (ICS)- See re-run below
M030338	C-048-24	39924014	Pb	440	470	mg/kg	20	4.77	09/01/99	J (ICS)- See re-run below
M030339	C-047-01	39924015	Pb	190	230	mg/kg	20	16.35	09/01/99	J (ICS)- See re-run below
M030339	C-047-02	39924016	Pb	220	240	mg/kg	20	8.94	09/01/99	J (ICS)- See re-run below
M030339	C-047-03	39924017	Pb	210	230	mg/kg	20	8.16	09/01/99	J (ICS)- See re-run below
M030339	C-047-04	39924018	Pb	140	150	mg/kg	20	6.25	09/01/99	J (ICS)- See re-run below
M030339	C-047-05	39924019	Pb	130	140	mg/kg	20	6.93	09/01/99	J (ICS)- See re-run below
M030339	C-047-06	39924020	Pb	570	610	mg/kg	20	6.61	09/01/99	J (ICS)- See re-run below
M030339	C-047-07	39924021	Pb	150	160	mg/kg	20	7.04	09/01/99	J (ICS)- See re-run below
M030339	C-047-08	39924022	Pb	150	160	mg/kg	20	4.69	09/01/99	J (ICS)- See re-run below
M030388	D-030-01	39924211	Pb	420	460	mg/kg	20	8.59	09/08/99	
M030388	D-030-02	39924212	Pb	620	720	mg/kg	20	13.58	09/08/99	
M030388	D-030-03	39924213	Pb	160	180	mg/kg	20	8.36	09/08/99	
M030388	D-030-04	39924214	Pb	190	200	mg/kg	20	5.78	09/08/99	
M030388	D-030-05	39924215	Pb	360	390	mg/kg	20	7.52	09/08/99	
M030388	D-030-06	39924216	Pb	480	530	mg/kg	20	10.14	09/08/99	
M030388	D-030-07	39924217	Pb	750	800	mg/kg	20	5.90	09/08/99	
M030466	C-048-26	39924515	Pb	140	150	mg/kg	20	7.94	09/08/99	
M030466	C-048-27	39924516	Pb	450	370	mg/kg	20	7.18	09/08/99	
M030466	C-048-28	39924517	Pb	230	260	mg/kg	20	9.87	09/08/99	
M030466	C-048-29	39924518	Pb	84	87	mg/kg	20	2.95	09/08/99	
M030466	C-048-30	39924519	Pb	350	370	mg/kg	20	4.86	09/08/99	
M030466	C-048-31	39924520	Pb	410	440	mg/kg	20	5.49	09/08/99	
M030467	C-047-09	39924521	Pb	52	55	mg/kg	20	5.33	09/08/99	
M030467	C-047-10	39924522	Pb	24	25	mg/kg	20	4.30	09/08/99	
M030467	C-047-11	39924523	Pb	200	210	mg/kg	20	4.45	09/08/99	
M030467	C-047-12	39924524	Pb	62	66	mg/kg	20	5.18	09/08/99	
M030467	C-047-13	39924525	Pb	230	240	mg/kg	20	4.44	09/08/99	
M030467	C-047-14	39924526	Pb	260	270	mg/kg	20	6.73	09/08/99	
M030480	C-074-01	39924573	Pb	130	140	mg/kg	20	3.13	09/08/99	
M030480	C-074-02	39924574	Pb	100	110	mg/kg	20	6.55	09/08/99	

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M030480	C-074-03/04	39924575	Pb	190	190	mg/kg	20	3.25	09/08/99	
M030480	C-074-05	39924576	Pb	72	76	mg/kg	20	5.11	09/08/99	
M030480	C-074-06	39924577	Pb	43	44	mg/kg	20	1.39	09/08/99	
M030480	C-074-07	39924578	Pb	39	41	mg/kg	20	5.71	09/08/99	
M030480	C-074-08	39924579	Pb	61	64	mg/kg	20	3.35	09/08/99	
M030480	C-074-09	39924580	Pb	280	300	mg/kg	20	5.32	09/08/99	
M030551	C-075-01	39924853	Pb	130	140	mg/kg	20	9.22	09/14/99	
M030551	C-075-02	39924854	Pb	300	310	mg/kg	20	2.12	09/14/99	
M030551	C-075-03	39924855	Pb	310	320	mg/kg	20	3.11	09/14/99	
M030551	C-075-04	39924856	Pb	470	500	mg/kg	20	7.10	09/14/99	
M030551	C-075-05	39924857	Pb	220	230	mg/kg	20	4.06	09/14/99	
M030551	C-075-06	39924858	Pb	40	42	mg/kg	20	4.63	09/14/99	
M030551	C-075-07	39924859	Pb	970	1000	mg/kg	20	6.31	09/14/99	
M030551	C-075-08	39924860	Pb	670	720	mg/kg	20	7.33	09/14/99	
M030551	C-075-09	39924861	Pb	650	670	mg/kg	20	2.67	09/14/99	
M030551	C-075-10	39924862	Pb	93	97	mg/kg	20	3.28	09/14/99	
M030635	C075-11	39925370	Pb	650	670	mg/kg	20	2.96	09/17/99	
M030635	C075-012	39925371	Pb	310	330	mg/kg	20	4.52	09/17/99	
M030691	C-034-01	39925663	Pb	120	130	mg/kg	20	4.19	09/21/99	
M030691	C-034-02	39925664	Pb	71	73	mg/kg	20	2.95	09/21/99	
M030691	C-034-03	39925665	Pb	180	190	mg/kg	20	6.03	09/21/99	
M030691	C-034-04	39925666	Pb	270	290	mg/kg	20	6.25	09/21/99	
M030691	C-034-05	39925667	Pb	550	610	mg/kg	20	9.15	09/21/99	
M030691	C-034-06	39925668	Pb	190	210	mg/kg	20	7.17	09/21/99	
M030691	C-034-07	39925669	Pb	74	76	mg/kg	20	2.93	09/21/99	
M030691	C-034-08	39925670	Pb	69	71	mg/kg	20	3.18	09/21/99	
M030801	D-061-12	39926202	Pb	340	350	mg/kg	20	3.45	09/28/99	
M030801	D-061-13	39926203	Pb	1200	1300	mg/kg	20	9.50	09/28/99	
M030801	D-061-14	39926204	Pb	450	490	mg/kg	20	8.37	09/28/99	
M030801	D-061-15	39926205	Pb	770	800	mg/kg	20	3.10	09/28/99	
M030801	D-061-16	39926206	Pb	420	450	mg/kg	20	5.44	09/28/99	
M030801	D-061-17	39926207	Pb	700	730	mg/kg	20	4.50	09/28/99	
M030801	D-061-18	39926208	Pb	690	740	mg/kg	20	5.87	09/28/99	
M030801	D-061-19	39926209	Pb	940	980	mg/kg	20	3.40	09/28/99	
M030801	D-061-20	39926210	Pb	400	430	mg/kg	20	7.59	09/28/99	

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M030801	D-061-21	39926211	Pb	910	970	mg/kg	20	5.96	09/28/99	
M030801	D-061-22	39926212	Pb	380	410	mg/kg	20	6.78	09/28/99	
M030801	D-061-23	39926213	Pb	350	370	mg/kg	20	5.05	09/28/99	
M030812	C-060-01	39926275	Pb	160	170	mg/kg	20	3.82	09/28/99	
M030812	C-060-02	39926276	Pb	74	76	mg/kg	20	2.63	09/28/99	
M030812	C-060-03	39926277	Pb	<20	<20	mg/kg	20	6.15	09/28/99	B
M030812	C-060-04	39926278	Pb	180	190	mg/kg	20	4.48	09/28/99	
M030812	C-060-05	39926279	Pb	130	240	mg/kg	20	3.69	09/28/99	
M030812	C-060-06	39926280	Pb	420	440	mg/kg	20	4.34	09/28/99	
M030827	C-063-01	39926318	Pb	110	120	mg/kg	20	2.73	09/29/99	
M030827	C-063-02	39926319	Pb	55	56	mg/kg	20	1.64	09/29/99	
M030827	C-063-03	39926320	Pb	76	77	mg/kg	20	1.56	09/29/99	
M030827	C-063-04	39926321	Pb	93	96	mg/kg	20	3.11	09/29/99	
M030827	C-063-05	39926322	Pb	71	77	mg/kg	20	7.76	09/29/99	
M030827	C-063-06	39926323	Pb	310	340	mg/kg	20	7.07	09/29/99	
M030827	C-063-07	39926324	Pb	210	220	mg/kg	20	1.63	09/29/99	
M030881	C-041-01	39926543	Pb	760	780	mg/kg	20	1.96	10/04/99	
M030881	C-041-02	39926544	Pb	46	48	mg/kg	20	4.10	10/04/99	
M030881	C-041-03	39926545	Pb	58	61	mg/kg	20	3.39	10/04/99	
M030881	C-041-04	39926546	Pb	33	33	mg/kg	20	2.65	10/04/99	
M030881	C-041-05	39926547	Pb	33	36	mg/kg	20	6.65	10/04/99	
M030881	C-041-06	39926548	Pb	69	74	mg/kg	20	7.09	10/04/99	
M030881	C-041-07	39926549	Pb	98	100	mg/kg	20	6.63	10/04/99	
M030881	C-041-08	39926550	Pb	76	80	mg/kg	20	5.29	10/04/99	
M030914	C-045-01	39926732	Pb	40	43	mg/kg	20	8.48	10/04/99	
M030914	C-045-02	39926733	Pb	220	250	mg/kg	20	10.50	10/04/99	
M030914	C-045-03	39926734	Pb	140	150	mg/kg	20	6.83	10/04/99	
M030914	C-045-04	39926735	Pb	110	120	mg/kg	10	7.27	10/04/99	
M030914	C-045-05	39926736	Pb	39	43	mg/kg	20	8.96	10/04/99	
M030914	C-045-06	39926737	Pb	22	23	mg/kg	20	2.37	10/04/99	
M030914	C-045-07	39926738	Pb	76	78	mg/kg	20	2.29	10/04/99	
M030914	C-045-08	39926739	Pb	68	69	mg/kg	20	1.50	10/04/99	
M030914	C-045-09	39926740	Pb	510	530	mg/kg	20	2.65	10/04/99	
M031032	C-061-01	39927282	Pb	390	410	mg/kg	20	4.49	10/11/99	J (SD,MS)
M031032	C-061-02	39927283	Pb	22	23	mg/kg	20	5.41	10/11/99	J (SD,MS)

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Report Number	Client Sample ID	Lab ID Number	Element	Result (Wet Wt.)	Result (Dry Wt.)	Result Units	Reporting Limit (mg/kg)	Moisture %	Date Analyzed	Comment/ Qualifier
M031032	C-061-03	39927284	Pb	26	27	mg/kg	20	6.24	10/11/99	J (SD,MS)
M031032	C-061-04	39927285	Pb	61	65	mg/kg	20	6.22	10/11/99	J (SD,MS)
M031032	C-061-05	39927286	Pb	160	170	mg/kg	20	3.91	10/11/99	J (SD,MS)
M031032	C-061-06	39927287	Pb	67	69	mg/kg	20	2.43	10/11/99	J (SD,MS)
M031032	C-061-07	39927288	Pb	71	77	mg/kg	20	7.29	10/11/99	J (SD,MS)
M031032	C-061-08	39927289	Pb	25	27	mg/kg	20	8.63	10/11/99	J (SD,MS)
M031032	C-041-09	39927290	Pb	29	30	mg/kg	20	3.22	10/11/99	J (SD,MS)
M031107	C-039-01	39927587	Pb	390	410	mg/kg	20	4.83	10/14/99	
M031107	C-039-02	39927588	Pb	250	260	mg/kg	20	3.80	10/14/99	
M031107	C-039-03	39927589	Pb	30	370	mg/kg	20	3.57	10/14/99	
M031107	C-039-04	39927590	Pb	440	460	mg/kg	20	5.47	10/14/99	
M031107	C-039-05	39927591	Pb	97	100	mg/kg	20	7.15	10/14/99	
M031107	C-039-06	39927592	Pb	46	51	mg/kg	20	8.46	10/14/99	
M031107	C-039-07	39927593	Pb	39	41	mg/kg	20	4.64	10/14/99	
M031172	C-039-08	39927847	Pb	160	170	mg/kg	20	3.92	10/18/99	
M031172	C-039-09	39927848	Pb	220	230	mg/kg	20	4.94	10/18/99	
M031172	C-039-10	39927849	Pb	61	63	mg/kg	20	3.12	10/18/99	
M031172	C-039-11	39927850	Pb	120	120	mg/kg	20	2.94	10/18/99	
M031172	C-039-12	39927851	Pb	80	88	mg/kg	20	9.07	10/18/99	
M031172	C-039-13	39927852	Pb	200	200	mg/kg	20	2.08	10/18/99	
M031172	C-039-14	39927853	Pb	690	700	mg/kg	20	1.87	10/18/99	
M031172	C-039-15	39927854	Pb	73	92	mg/kg	20	10.99	10/18/99	
M031231	C-046-01	39928056	Pb	51	56	mg/kg	20	8.83	10/20/99	
M031231	C-046-02	39928057	Pb	26	27	mg/kg	20	5.05	10/20/99	
M031231	C-046-03	39928058	Pb	280	300	mg/kg	20	5.49	10/20/99	
M031231	C-046-04	39928059	Pb	52	53	mg/kg	20	1.59	10/20/99	
M031231	C-046-05	39928060	Pb	130	130	mg/kg	20	4.17	10/20/99	
M031231	C-046-06	39928061	Pb	170	180	mg/kg	20	3.81	10/20/99	
M031231	C-046-07	39928062	Pb	76	80	mg/kg	20	4.87	10/20/99	
M031231	C-046-08	39928063	Pb	71	73	mg/kg	20	1.93	10/20/99	
M031231	C-046-09	39928064	Pb	170	170	mg/kg	20	4.05	10/20/99	
M031231	C-046-10	39928065	Pb	120	130	mg/kg	20	6.57	10/20/99	
M031231	C-046-11	39928066	Pb	190	200	mg/kg	20	4.95	10/20/99	
M031231	C-046-12	39928067	Pb	270	280	mg/kg	20	6.08	10/20/99	
M031231	C-046-13	39928068	Pb	99	100	mg/kg	20	3.56	10/20/99	

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M031231	C-046-14	39928069	Pb	190	200	mg/kg	20	6.14	10/20/99	
M031231	C-046-15	39928070	Pb	560	580	mg/kg	20	3.19	10/20/99	
M031231	C-046-16	39928071	Pb	540	610	mg/kg	20	11.36	10/20/99	
M031231	C-040-01	39928072	Pb	740	780	mg/kg	20	5.72	10/20/99	
M031231	C-040-02	39928073	Pb	890	950	mg/kg	20	5.90	10/20/99	
M031231	C-040-03	39928074	Pb	1700	1900	mg/kg	20	8.81	10/20/99	
M031231	C-040-04	39928075	Pb	460	470	mg/kg	20	2.45	10/20/99	
					Moisture Std Dev =			3.27		
					Moisture Average =			6.27		
					Soil Reanalysis					
M030338	C-048-01	39923990	Pb	<20	21	mg/kg	20	5.26	10/29/99	B
M030338	C-048-02	39923991	Pb	48	53	mg/kg	20	8.37	10/29/99	
M030338	C-048-03	39923992	Pb	330	350	mg/kg	20	6.05	10/29/99	
M030338	C-048-04	39923993	Pb	240	260	mg/kg	20	8.85	10/29/99	
M030338	C-048-05	39923994	Pb	430	520	mg/kg	20	16.87	10/29/99	
M030338	C-048-06	39923995	Pb	77	85	mg/kg	20	9.73	10/29/99	
M030338	C-048-07	39923996	Pb	280	300	mg/kg	20	6.46	10/29/99	
M030338	C-048-08	39923997	Pb	130	140	mg/kg	20	5.59	10/29/99	
M030338	C-048-09	39923998	Pb	240	270	mg/kg	20	9.90	10/29/99	
M030338	C-048-10	39923999	Pb	55	64	mg/kg	20	13.86	10/29/99	
M030338	C-048-11	39924000	Pb	100	110	mg/kg	20	10.71	10/29/99	
M030338	C-048-12	39924001	Pb	170	180	mg/kg	20	6.35	10/29/99	
M030338	C-048-13	39924002	Pb	54	62	mg/kg	20	11.90	10/29/99	
M030338	C-048-14	39924003	Pb	96	110	mg/kg	20	9.04	10/29/99	
M030338	C-048-15	39924004	Pb	39	41	mg/kg	20	5.37	10/29/99	
M030338	C-048-16	39924005	Pb	36	41	mg/kg	20	12.72	10/29/99	
M030338	C-048-17	39924006	Pb	72	78	mg/kg	20	7.88	10/29/99	
M030338	C-048-25	39924007	Pb	570	650	mg/kg	20	12.23	10/29/99	
M030338	C-048-18	39924008	Pb	520	550	mg/kg	20	5.05	10/29/99	
M030338	C-048-19	39924009	Pb	570	580	mg/kg	20	2.43	10/29/99	
M030338	C-048-20	39924010	Pb	710	740	mg/kg	20	3.74	10/29/99	
M030338	C-048-21	39924011	Pb	140	150	mg/kg	20	9.83	10/29/99	

3777 Depot Road, Suite 409, Hayward, California 94545-2761 * Telephone: 150/887-8828 800/824-FASI Fax: 510/887/4218

Report Number	Client Sample ID	Lab ID Number	Element	Result (Wet Wt.)	Result (Dry Wt.)	Result Units	Reporting Limit (mg/kg)	Moisture %	Date Analyzed	Comment/ Qualifier
M030338	C-048-22	39924012	Pb	470	490	mg/kg	20	3.13	10/29/99	
M030338	C-048-23	39924013	Pb	720	750	mg/kg	20	4.29	10/29/99	
M030338	C-048-24	39924014	Pb	440	460	mg/kg	20	4.77	10/29/99	
M030339	C-047-01	39924015	Pb	190	220	mg/kg	20	16.35	10/29/99	
M030339	C-047-02	39924016	Pb	210	230	mg/kg	20	8.94	10/29/99	
M030339	C-047-03	39924017	Pb	210	220	mg/kg	20	8.16	10/29/99	
M030339	C-047-04	39924018	Pb	130	140	mg/kg	20	6.25	10/29/99	
M030339	C-047-05	39924019	Pb	130	140	mg/kg	20	6.93	10/29/99	
M030339	C-047-06	39924020	Pb	630	680	mg/kg	20	6.61	10/29/99	
M030339	C-047-07	39924021	Pb	140	150	mg/kg	20	7.04	10/29/99	
M030339	C-047-08	39924022	Pb	150	150	mg/kg	20	4.69	10/29/99	
M029940	W03901020308	39922286	Pb	1100	1300	mg/kg	20	9.17	10/29/99	
M029940	W039040607	39922287	Pb	VOID	VOID	mg/kg	20	13.73	10/29/99	Analysis error - re-run
M029940	W039040607	39922287	Pb	580	670	mg/kg	20	13.73	11/8/99	

Richard Hale

Rich Hale, Laboratory Supervisor, Hayward Laboratory

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3777 Depot Road, Suite 409, Hayward, California 94545-2761 * Telephone: 150/887-8828 800/824-FASI Fax: 510/887/4218

Metals Analysis

ICAP Emission

Parsons Engineering Science, Inc.

2101 Webster St., Suite 700
Oakland, CA 94612

Client Number : 3812
Report Number: M030388
Date Received : 09/02/99
Date Analyzed : 09/08/99
Date Reported : 09/09/99

Purchase Order# :
Job ID # : 732483
Site : not indicated

Bulk (TTLC)

Final Report

Sample Number	Lab Num	Elem	Result	Units	*MRL	Reference
D-030-01	39924211	Pb	420	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-030-02	39924212	Pb	620	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-030-03	39924213	Pb	160	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-030-04	39924214	Pb	190	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-030-05	39924215	Pb	360	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-030-06	39924216	Pb	480	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-030-07	39924217	Pb	750	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					

Richard Hale

Richard Hale, Laboratory Supervisor

'MRL':Method Reporting Limit gives the lower limit of numerical reliability for this analytical method.

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Los Angeles Office: 2959 Pacific Commerce Drive, Rancho Dominguez, California 90221 - Telephone: 310/763-2374 Fax: 310/763-8684

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REQUEST FOR ANALYSES TABLE/CHAIN-OF-CUSTODY RECORD

Laboratory:	Project Manager:	Project Number:
Forensic Analytical	David Diamond	732483

Sampler(s): (signature) Jim Blank

Comments:
1 - Prepare leachate per TCLP, analyze for lead
2 - Prepare Leachate per CA-WET, analyze for lead
3 - preserve water samples to pH<2 with HNO_3, cool to 4°C
Preservative: cool all samples to 4°C for all analyses

Sample ID	Date	Time	Matrix	No. of Containers	Composite No.	METHOD	Holding Time: Pb by SW6010A (180 days)	TCLP - Lead[1] (180 days)	CA-WET - Lead[2] (180 days)	MS/MSD (180 days)	Laboratory Duplicate (180 days)	Turn Around Time (days)	Remarks
D-030-01	9/1/99	1615	SOIL	1			X					5 day	
D-030-02	9/1/99	1655	SOIL	1			X					5 day	
D-030-03	9/1/99	1710	SOIL	1			X					5 day	
D-030-04	9/1/99	1715	SOIL	1			X					5 day	
D-030-05	9/1/99	1730	SOIL	1			X					5 day	
D-030-06	9/1/99	1745	SOIL	1			X					5 day	
D-030-07	9/1/99	1800	SOIL	~~1~~ STET			X					5 day	
~~D-030-08~~	~~9/1/99~~		~~SOIL~~	~~1~~			~~X~~	not	Sampled			5 day	
~~D-030-09~~	~~9/1/99~~		~~SOIL~~	~~1~~			~~X~~	not	Sampled			5 day	
~~D-030-10~~	~~9/1/99~~		~~SOIL~~	~~1~~			~~X~~	not	Sampled			5 day	
~~D-030-11~~	~~9/1/99~~		~~SOIL~~	~~1~~			~~X~~	not	Sampled			5 day	
W-030-01	9/1/99	1620	SOIL	1									Do Not Analyze, hold for request
W-030-02	9/1/99	1705	SOIL	1									Do Not Analyze, hold for request
W-030-03	9/1/99	1650	SOIL	1									Do Not Analyze, hold for request
~~W-030-04~~ STET	9/1/99	1740	SOIL	1									Do Not Analyze, hold for request
~~W-030-05~~	~~9/1/99~~		~~SOIL~~	~~1~~			Not	Sampled					Do Not Analyze, hold for request
~~W-030-06~~	~~9/1/99~~		~~SOIL~~	~~1~~			Not	Sampled					Do Not Analyze, hold for request
~~W-030-07~~	~~9/1/99~~		~~SOIL~~	~~1~~			Not	Sampled					Do Not Analyze, hold for request
~~W-030-08~~	~~9/1/99~~		~~SOIL~~	~~1~~			Not	Sampled					Do Not Analyze, hold for request
C-030	9/1/99	1640	SOIL	1			~~X~~					~~5 days~~	Do Not Analyze, hold for request
E-009-01A	9/1/99	1100	WATER[3]	4			X			X	X	5 days	

Ambient cooler temperature: _____ °C

Relinquished by: (signature)	Time:	Date:	Received by: (signature)	Remarks:
Jim Blank	1800	9/1/99	[signature] 9/2/99	
Relinquished by: (signature)	Time:	Date:	Received by: (signature)	Remarks:
Relinquished by: (signature)	Time:	Date:	Received by: (signature)	Remarks:

Metals Analysis

ICAP Emission

Parsons Engineering Science, Inc.

2101 Webster St., Suite 700
Oakland, CA 94612

Client Number : 3812
Report Number: M029791
Date Received : 07/30/99
Date Analyzed : 07/30/99
Date Reported : 08/02/99

Purchase Order# :
Job ID # : 732483
Site :

Bulk (TTLC)

Final Report

Sample Number	Lab Num	Elem	Result	Units	*MRL	Reference
D-042-01	39921747	Pb	160	mg/Kg	6	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
C-042	39921748	Pb	250	mg/Kg	6	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-042-09	39921749	Pb	330	mg/Kg	6	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					

AUG 3

Dave Sandusky, Laboratory Director

'MRL':Method Reporting Limit gives the lower limit of numerical reliability for this analytical method.

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Los Angeles Office: 2959 Pacific Commerce Drive, Rancho Dominguez, California 90221 - Telephone: 310/763-2374 Fax: 310/763-8684

REQUEST FOR ANALYSES TABLE/CHAIN-OF-CUSTODY RECORD

Laboratory:	Project Manager:	Project Number:	Analyses Required							Comments:
Forensic Analytical	David Diamond	732483	Holding Time	180 days	180 days	180 days	180 days	180 days	Turn Around Time (days)	1 - Prepare leachate per TCLP, analyze for lead 2 - Prepare Leachate per CA-WET, analyze for lead 3 - preserve water samples to pH<2 with HNO_3, cool to 4°C Preservative: cool all samples to 4°C for all analyses
Sampler(s): (signature) And Bulsh			METHOD	Pb by SW6010A	TCLP - Lead[1]	CA-WET - Lead[2]	MS/MSD	Laboratory Duplicate		

Sample ID	Date	Time	Matrix	No. of Containers	Composite No.	METHOD	Pb by SW6010A	TCLP - Lead[1]	CA-WET - Lead[2]	MS/MSD	Laboratory Duplicate	Turn Around Time (days)	Remarks
							X	X	X			STAT	
D-042-01	7/30/99	925	SOIL	1			X	~~X~~ NO	~~X~~ NO	AB		STAT	Pb by 6010 only.
~~D-042-02~~			~~SOIL~~	~~1~~			X	X	X			STAT	
~~D-042-03~~			SOIL	1			X	X	X			STAT	
~~D-042-04~~			SOIL	1			X	X	X			STAT	
~~D-042-05~~			SOIL	1			X	X	X			STAT	
~~D-042-06~~			SOIL	1			X	X	X			STAT	
~~D-042-07~~			SOIL	1			X	X	X			STAT	
~~D-042-08~~			SOIL	1			X	X	X			STAT	
W-042-01	7/30/99	955	SOIL	1			X	X	X			STAT	
W-042-02	7/30/99	947	SOIL	1			X	X	X			STAT	
~~W-042-03~~	NS		SOIL	1			X	X	X			STAT	
~~W-042-04~~	NS		SOIL	1			X	X	X			STAT	
W-042-05	7/30/99	935	SOIL	1			X	X	X			STAT	
C-042-~~01~~	7/30/99	1000	SOIL	1			X	~~X~~	~~X~~			STAT	Pb by 6010 only
~~C-042-02~~	NS		SOIL	1			X	X	X			STAT	
~~C-042-03~~	NS		SOIL	1			X	X	X			STAT	
~~C-042-04~~	NS		SOIL	1			X	X	X			STAT	
~~D-042-04~~	7/30/99	1007	Soil	1			X	~~X~~	~~X~~			STAT	Pb by 6010 only

Ambient cooler temperature: _____ °C

Relinquished by: (signature)	Time:	Date:	Received by: (signature)	Remarks:
Anla Bulsh	7/30/99	7/21	[signature] 7/30/99	
Relinquished by: (signature)	Time:	Date:	Received by: (signature)	Remarks:
Relinquished by: (signature)	Time:	Date:	Received by: (signature)	Remarks:

Metals Analysis

ICAP Emission

Parsons Engineering Science, Inc.

2101 Webster St., Suite 700
Oakland, CA 94612

Client Number : 3812
Report Number: M030048
Date Received : 08/16/99
Date Analyzed : 08/22/99
Date Reported : 08/23/99

Purchase Order# :
Job ID # : 732483
Site : Verdese Carter Park

Bulk (TTLC)

Final Report

Sample Number	Lab Num	Elem	Result	Units	*MRL	Reference
C-046	39922702	Pb	1600	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-046-01	39922703	Pb	1500	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-046-02	39922704	Pb	430	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-046-16	39922705	Pb	760	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-046-14	39922706	Pb	230	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
6-15	39922707	Pb	610	mg/Kg	20	EPA 6010A M
ment:	Due to sample matrix, this result may not be repeatable.					
D-046-07	39922708	Pb	660	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-046-08	39922709	Pb	740	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-046-17	39922710	Pb	580	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-046-18	39922711	Pb	450	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-046-13	39922712	Pb	630	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					

Richard Hale, Laboratory Supervisor

'MRL':Method Reporting Limit gives the lower limit of numerical reliability for this analytical method.

al results and reports are generated by Forensic Anaytical at the request of and for the exclusive use of the person or entity (client) named on such report. Results, reports or s of same will not be released by Forensic Analytical to any third party without prior written consent from client. This report applies only to the sample(s) tested. Supporting tory documentation is available upon request. This report must not be reproduced except in full with approval from Forensic Analytical. The client is soley responsible for the use and interpretation of test results and reports requested from Forensic Analytical. This report must not be used by the client to claim product endorsement by NVLAP or any agency of the US Government. Forensic Analytical is not able to assess the degree of hazard resulting from materials analyzed. Forensic Analytical reserves the right to dispose of samples after a period of thirty days. The samples will be disposed of according to all state and federal guidelines.

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Los Angeles Office: 2959 Pacific Commerce Drive, Rancho Dominguez, California 90221 - Telephone: 310/763-2374 Fax: 310/763-8684

Metals Analysis
ICAP Emission

Parsons Engineering Science, Inc.

2101 Webster St., Suite 700
Oakland, CA 94612

Client Number : 3812
Report Number: M030048
Date Received : 08/16/99
Date Analyzed : 08/22/99
Date Reported : 08/23/99

Purchase Order# :
Job ID # : 732483
Site : Verdese Carter Park

Bulk (TTLC)

Final Report

Sample Number	Lab Num	Elem	Result	Units	*MRL	Reference
D-046-03	39922713	Pb	930	mg/Kg	20	EPA 6010A M

Comment: Due to sample matrix, this result may not be repeatable.

Richard Hale, Laboratory Supervisor

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Los Angeles Office: 2959 Pacific Commerce Drive, Rancho Dominguez, California 90221 - Telephone: 310/763-2374 Fax: 310/763-8684

PARSONS ENGINEERING SCIENCE, INC.
2101 Webster Street, Suite 700
Oakland, California 94612
Phone: (510) 891-9085
FAX: (510) 835-4355

CHAIN OF CUSTODY RECORD

Project No.: 732

Project Name/Location: Hec Pik

Project Manager: Diamond, David

Sampler(s): (Printed Name and Signature) Anne Bielski A Bielski's Blacke

ANALYSIS REQUIRED / PRESERVATIVE

Sample ID	Sample Location	Date	Time	Matrix	NO. OF CONTAINERS	b Subolva	TCLP	Pb	A WET	b						TO BE COMPOSITED BY LAB? TURNAROUND TIME	Remarks
																	cool all samples to 4°C for analysis
V-046-02	area 4	12	140	"	1											"	Cr
V 046 05	"	"	148	"	1	X	X				Co		2			"	composite 2
N 046 07	"	"	150	"	1	X	X	X								"	lab
V 04 -04	"	"	115	"	1	X										"	
C -046	"	"		"												5	
-046-0	"	"	1210	"	1											"	
- -	"	"	20	"												"	
-046-16	"	"	225	"	1	X										"	
-046-	"	"	1240	"	1											"	
-046-1	"	"	24	"		X										"	
D- 46-07	"	"	1250	"												"	
D- 6-08	"	"	12	"												"	
-14 -17	"	"	1258	"	1	X										"	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	NOTES:
[signature]	2/16/99	500	[signature]	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY: (SIGNATURE)	DATE	TIME	REMARKS/COMMENTS:
			[signature]	12/2/99		Courier

DISTRIBUTION: WHITE: ACCOMPANIES SHIPMENT & RET'N WITH LAB REPORT, CANARY: LAB COPY, PINK: FIELD COPY.

PARSONS ENGINEERING SCIENCE, INC.
2101 Webster Street, Suite 700
Oakland, California 94612
Phone: (510) 891-9085
FAX: (510) 835-4355

3010

CHAIN OF CUSTODY RECORD

ANALYSIS REQUIRED / PRESERVATIVE

Project No.: 732483

Project Name/Location: erdose Canoe Prk

Project Manager: Diamond

Sampler : (Printed Name and Signature) la Bulski Abielskis J Lake

S ple ID	Sample Location	Date	Time	Matrix	NO. OF CONTAINERS	Pb SW6010A	O BE COMPOSITED BY LAB? RNAROUND TIME	Remarks
7 -046-			13	Soi				
-04 -13	"	"		"		X	"	
-046-0	"	"	13	"	.1		"	
- 13	"	"	1600	"	2			HNO_3, pH<2, 100 4°C

cool all samples to 4°C for analyses

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	NOTES:
[signature]	8/16/99	800		

ELINQUISHED BY: (SIGNATURE)	DATE	TIME	R C	BY: (SIGNA	RE	TE	ME	EMARKS/COMMENTS:
				8	16	9	1 N	Courier

DISTRIBUTION: WHITE: ACCOMPANIES SHIPMENT & RET'N WITH LAB EP RT, CANARY: LAB COPY, PINK: FIELD COPY.

KATALYST

ANALYTICAL TECHNOLOGIES, INC.

RECEIVED AUG 10 1998 PARSONS ENGINEERING SCIENCE, INC. OAKLAND

August 5, 1998

Mr. Diamond
Parsons Engineering
2101 Webster Street
Suite 700
Oakland, CA 94612

Dear Mr. Diamond,

Katalyst Analytical Technologies, Inc., appreciates the opportunity to provide the attached report of analyses for Katalyst sample delivery group #27209, received 07/09/98 by our laboratory. This deliverable includes tabulated results, chain of custody and dates report.

Should you have any questions regarding this data, please contact me at (309) 589-8002.

Sincerely,

KATALYST ANALYTICAL TECHNOLOGIES, INC.

Chris Ohland

Chris Ohland
Project Manager

Attachments

8901 N. Industrial Road • Suite 100 • Peoria, IL 61615-1581 • Phone: (309) 589-8000 • Fax: (309) 692-5232 • www.katalyst1.com

Katalyst Analytical Technologies, Inc. 08/05/98 STATUS :FINAL PAGE 1
PROJECT NUMBER 130M02 5100 PROJECT NAME PARSONS ENGINEERING SCIENCE
FIELD GROUP LAB COORDINATOR Christopher Ohland

CLIENT SAMPLE ID'S:			D-061-01	D-061-02	D-061-03	D-061-04	D-061-05
FIELD GROUP:			27209	27209	27209	27209	27209
SEQUENCE #:			1	2	3	4	5
DATE COLLECTED:			07/08/98	07/08/98	07/08/98	07/08/98	07/08/98
TIME COLLECTED:			10:00	10:00	12:21	10:25	12:07
PARAMETERS	UNITS	METHOD					
Lead	MG/KG	6010	266	365	687	456	807
Moisture	%	D2216	10	10	15	10	20

PROJECT NUMBER 130M02 5100 PROJECT NAME PARSONS ENGINEERING SCIENCE
FIELD GROUP LAB COORDINATOR Christopher Ohland

CLIENT SAMPLE ID'S:			D-061-06	D-061-07	D-061-08	D-061-09	D-061-10
FIELD GROUP:			27209	27209	27209	27209	27209
SEQUENCE #:			6	7	8	9	10
DATE COLLECTED:			07/08/98	07/08/98	07/08/98	07/08/98	07/08/98
TIME COLLECTED:			11:52	11:30	11:25	11:45	12:29
PARAMETERS	UNITS	METHOD					
Lead	MG/KG	6010	503	429	445	550	366
Moisture	%	D2216	15	12	12	13	17

PROJECT NUMBER 130M02 5100 PROJECT NAME PARSONS ENGINEERING SCIENCE
FIELD GROUP LAB COORDINATOR Christopher Ohland

CLIENT SAMPLE ID'S:			D-061-11	W-061-01	W-061-02	W-061-03	W-061-04
FIELD GROUP:			27209	27209	27209	27209	27209
SEQUENCE #:			11	12	13	14	15
DATE COLLECTED:			07/08/98	07/08/98	07/08/98	07/08/98	07/08/98
TIME COLLECTED:			10:45	12:55	12:44	10:20	12:45
PARAMETERS	UNITS	METHOD					
Lead	MG/KG	6010	1630	NRQ	NRQ	NRQ	NRQ
Moisture	%	D2216	10	NRQ	NRQ	NRQ	NRQ
HOLD SAMPLE			NRQ	07-09-98	07-09-98	07-09-98	07-09-98

NRQ - Analysis not requested.

PROJECT NUMBER 130M02 5100 PROJECT NAME PARSONS ENGINEERING SCIENCE
FIELD GROUP LAB COORDINATOR Christopher Ohland

CLIENT SAMPLE ID'S:			W-061-05	W-061-06	W-061-07	W-061-08	C-061-1,2,3,4
FIELD GROUP:			27209	27209	27209	27209	27209
SEQUENCE #:			16	17	18	19	20
DATE COLLECTED:			07/08/98	07/08/98	07/08/98	07/08/98	07/08/98
TIME COLLECTED:			12:03	11:15	11:05	10:30	10:30
PARAMETERS	UNITS	METHOD					
Lead	MG/KG	6010	NRQ	NRQ	NRQ	NRQ	1500
Moisture	%	D2216	NRQ	NRQ	NRQ	NRQ	14
HOLD SAMPLE			07-09-98	07-09-98	07-09-98	07-09-98	NRQ

NRQ - Analysis not requested.

Katalyst Analytical Technologies, Inc.
PARSONS ENGINEERING 27209 DATES REPORT

SAMPLE	STATION ID	COLLECT. TIME	RECEIPT	CLASSIFICATION	LEACHATE	EXTRACTION	ANALYSIS	LCH	EXT	ANL	BATCH
							DAYS, ACT/HT				
27209*1	D-061-01	07/08/98 10:00A	07/09/98	Lead	NA	NA	07/30/98 01:54P	NA	NA	22/180	P42698
				Moisture	NA	NA	07/13/98 05:55P	NA	NA	5/180	P42508
27209*2	D-061-02	07/08/98 10:00A	07/09/98	Lead	NA	NA	07/30/98 01:57P	NA	NA	22/180	P42698
				Moisture	NA	NA	07/13/98 05:55P	NA	NA	5/180	P42508
27209*3	D-061-03	07/08/98 12:21P	07/09/98	Lead	NA	NA	07/30/98 02:23P	NA	NA	22/180	P42698
				Moisture	NA	NA	07/13/98 05:55P	NA	NA	5/180	P42508
27209*4	D-061-04	07/08/98 10:25A	07/09/98	Lead	NA	NA	07/30/98 02:27P	NA	NA	22/180	P42698
				Moisture	NA	NA	07/13/98 05:55P	NA	NA	5/180	P42508
27209*5	D-061-05	07/08/98 12:07P	07/09/98	Lead	NA	NA	07/30/98 02:30P	NA	NA	22/180	P42698
				Moisture	NA	NA	07/13/98 05:55P	NA	NA	5/180	P42508
27209*6	D-061-06	07/08/98 11:52A	07/09/98	Lead	NA	NA	07/30/98 02:33P	NA	NA	22/180	P42698
				Moisture	NA	NA	07/13/98 05:55P	NA	NA	5/180	P42508
27209*7	D-061-07	07/08/98 11:30A	07/09/98	Lead	NA	NA	07/30/98 02:37P	NA	NA	22/180	P42698
				Moisture	NA	NA	07/13/98 05:55P	NA	NA	5/180	P42508
27209*8	D-061-08	07/08/98 11:25A	07/09/98	Lead	NA	NA	07/30/98 02:47P	NA	NA	22/180	P42698
				Moisture	NA	NA	07/13/98 05:55P	NA	NA	5/180	P42508
27209*9	D-061-09	07/08/98 11:45A	07/09/98	Lead	NA	NA	07/30/98 02:50P	NA	NA	22/180	P42698
				Moisture	NA	NA	07/13/98 05:55P	NA	NA	5/180	P42508
27209*10	D-061-10	07/08/98 12:29P	07/09/98	Lead	NA	NA	07/30/98 02:53P	NA	NA	22/180	P42698
				Moisture	NA	NA	07/13/98 05:55P	NA	NA	5/180	P42508
27209*11	D-061-11	07/08/98 10:45A	07/09/98	Lead	NA	NA	07/30/98 01:43P	NA	NA	22/180	P42698
				Moisture	NA	NA	07/13/98 05:55P	NA	NA	5/180	P42508
27209*12	W-061-01	07/08/98 12:55P	07/09/98	HOLD SAMPLE	NA	NA	05:55P	NA	NA	/NA	
27209*13	W-061-02	07/08/98 12:44P	07/09/98	HOLD SAMPLE	NA	NA	05:55P	NA	NA	/NA	
27209*14	W-061-03	07/08/98 10:20A	07/09/98	HOLD SAMPLE	NA	NA	05:55P	NA	NA	/NA	
27209*15	W-061-04	07/08/98 12:45P	07/09/98	HOLD SAMPLE	NA	NA	05:55P	NA	NA	/NA	
27209*16	W-061-05	07/08/98 12:03P	07/09/98	HOLD SAMPLE	NA	NA	05:55P	NA	NA	/NA	
27209*17	W-061-06	07/08/98 11:15A	07/09/98	HOLD SAMPLE	NA	NA	05:55P	NA	NA	/NA	
27209*18	W-061-07	07/08/98 11:05A	07/09/98	HOLD SAMPLE	NA	NA	05:55P	NA	NA	/NA	
27209*19	W-061-08	07/08/98 10:30A	07/09/98	HOLD SAMPLE	NA	NA	05:55P	NA	NA	/NA	
27209*20	C-061-1,2,3,4	07/08/98 10:30A	07/09/98	Lead	NA	NA	07/30/98 01:46P	NA	NA	22/180	P42698
				Moisture	NA	NA	07/13/98 05:55P	NA	NA	5/180	P42508

FOOTNOTES: * = EXCEEDS CRITERIA ACT = ACTUAL HT = HOLDING TIME

KATALYST ANALYTICAL TECHNOLOGIES, INC.

08-05-98

QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation (6010)

Laboratory Sample Identifier	Client Sample ID	Prep. Batch Identifier	Analysis Lot Identifier	Analysis Date	Analyst's Initials
27209*1	D-061-01	338I	05IB	07-30-98	HS
27209*2	D-061-02	338I	05IB	07-30-98	HS
27209*3	D-061-03	338I	05IB	07-30-98	HS
27209*4	D-061-04	338I	05IB	07-30-98	HS
27209*5	D-061-05	338I	05IB	07-30-98	HS
27209*6	D-061-06	338I	05IB	07-30-98	HS
27209*7	D-061-07	338I	05IB	07-30-98	HS
27209*8	D-061-08	338I	05IB	07-30-98	HS
27209*9	D-061-09	338I	05IB	07-30-98	HS
27209*10	D-061-10	338I	05IB	07-30-98	HS
27209*11	D-061-11	338I	05IB	07-30-98	HS
27209*20	C-061-1,2,3,4	338I	05IB	07-30-98	HS

METHOD BLANK
Metals Analysis and Preparation (6010)
Project: 27209

Matrix: SOLIDS
QC Run: 338I*1
Lab Batch ID: P42698

Analyte	Units	Measured	Reporting Limit
Lead	MG/KG	ND	50.0

LABORATORY CONTROL SAMPLE
Metals Analysis and Preparation (6010)
Project: 27209

Matrix: SOLIDS
QC Run: 338I*1
Lab Batch ID: P42698

Analyte	Units	Concentration Spiked	Concentration Measured	Accuracy(%) Recovery	Accuracy(%) Limits
Lead	MG/KG	500	480	96	80 - 120

MATRIX SPIKE/MATRIX SPIKE DUPLICATE
Metals Analysis and Preparation (6010)
Project: 27209

Matrix: SOLIDS
Sample ID: 27209*2
Lab Batch ID: P42698

Analyte	Units	Sample Result	Concentration MS Result	Concentration MSD Result	Amount Spiked MS	Amount Spiked MSD	Percent Recovery MS	Percent Recovery MSD	Recov. Accep. Limits	RPD MS-MSD	RPD Accept Limits
Lead	MG/KG	365	834	815	556	556	84	81	75-125	3.6	35

KATALYST ANALYTICAL TECHNOLOGIES, INC.

08-05-98

LABORATORY DUPLICATE
Metals Analysis and Preparation (6010)
Project: 27209

Matrix: SOLIDS
Sample ID: 27209*2
Lab Batch ID: P42698

Analyte	Units	Concentration Data Sample	Concentration Replicate	Precision Rel.% Dif.	Precision Limits
Lead	MG/KG	365	290	23	35

INITIAL CALIBRATION VERIFICATION
Metals Analysis and Preparation (6010)
Project: 27209

Matrix: SOLIDS
QC Run: 05IB*1
Lab Batch ID: P42698

Analyte	Units	Concentration Spiked	Concentration Measured	Accuracy(%) Recovery	Accuracy(%) Limits
Lead	MG/KG	6.00	5.85	97.5	90 - 110

INITIAL CALIBRATION BLANK
Metals Analysis and Preparation (6010)
Project: 27209

Matrix: SOLIDS
QC Run: 05IB*1
Lab Batch ID: P42698

Analyte	Units	Measured	Reporting Limit
Lead	MG/KG	ND	0.50

INITIAL CRDL STANDARD FOR ICP
Metals Analysis and Preparation (6010)
Project: 27209

Matrix: SOLIDS
QC Run: 05IB*1
Lab Batch ID: P42698

Analyte	Units	Concentration Spiked	Concentration Measured	Accuracy(%) Recovery
Lead	MG/KG	0.500	0.510	102

CONTINUING CALIBRATION VERIFICATION
Metals Analysis and Preparation (6010)
Project: 27209

Matrix: SOLIDS
QC Run: 05IB*1
Lab Batch ID: P42698

Analyte	Units	Concentration Spiked	Concentration Measured	Accuracy(%) Recovery	Accuracy(%) Limits
Lead	MG/KG	4.00	3.92	98.0	90 - 110

KATALYST ANALYTICAL TECHNOLOGIES, INC.

08-05-98

CONTINUING CALIBRATION VERIFICATION (cont.)
Metals Analysis and Preparation (6010)
Project: 27209

Matrix: SOLIDS
QC Run: 05IB*2
Lab Batch ID: P42698

Analyte	Units	Concentration Spiked	Concentration Measured	Accuracy(%) Recovery	Accuracy(%) Limits
Lead	MG/KG	4.00	3.90	97.5	90 - 110

Matrix: SOLIDS
QC Run: 05IB*3
Lab Batch ID: P42698

Analyte	Units	Concentration Spiked	Concentration Measured	Accuracy(%) Recovery	Accuracy(%) Limits
Lead	MG/KG	4.00	3.91	97.8	90 - 110

Matrix: SOLIDS
QC Run: 05IB*4
Lab Batch ID: P42698

Analyte	Units	Concentration Spiked	Concentration Measured	Accuracy(%) Recovery	Accuracy(%) Limits
Lead	MG/KG	4.00	3.94	98.5	90 - 110

Matrix: SOLIDS
QC Run: 05IB*5
Lab Batch ID: P42698

Analyte	Units	Concentration Spiked	Concentration Measured	Accuracy(%) Recovery	Accuracy(%) Limits
Lead	MG/KG	4.00	3.93	98.2	90 - 110

CONTINUING CALIBRATION BLANK
Metals Analysis and Preparation (6010)
Project: 27209

Matrix: SOLIDS
QC Run: 05IB*1
Lab Batch ID: P42698

Analyte	Units	Measured	Reporting Limit
Lead	MG/KG	ND	0.500

Matrix: SOLIDS
QC Run: 05IB*2
Lab Batch ID: P42698

Analyte	Units	Measured	Reporting Limit
Lead	MG/KG	ND	0.500

KATALYST ANALYTICAL TECHNOLOGIES, INC.

08-05-98

CONTINUING CALIBRATION BLANK (cont.)
Metals Analysis and Preparation (6010)
Project: 27209

Matrix: SOLIDS
QC Run: 05IB*3
Lab Batch ID: P42698

Analyte	Units	Measured	Reporting Limit
Lead	MG/KG	ND	0.500

Matrix: SOLIDS
QC Run: 05IB*4
Lab Batch ID: P42698

Analyte	Units	Measured	Reporting Limit
Lead	MG/KG	ND	0.500

Matrix: SOLIDS
QC Run: 05IB*5
Lab Batch ID: P42698

Analyte	Units	Measured	Reporting Limit
Lead	MG/KG	ND	0.500

POST DIGESTION SPIKE
Metals Analysis and Preparation (6010)
Project: 27209

Matrix: SOLIDS
Sample ID: 27209*2
Lab Batch ID: P42698

Analyte	Units	Sample Result	Concentration Spiked	Concentration Measured	Accuracy(%) Recovery	Accuracy(%) Limits
Lead	MG/KG	365	556	856	88.3	75 - 125

ICP SERIAL DILUTION
Metals Analysis and Preparation (6010)
Project: 27209

Matrix: SOLIDS
Sample ID: 27209*2
Lab Batch ID: P42698

Analyte	Units	Concentration Data Sample	Concentration Replicate	Precision Rel.% Dif.	Precision Limits
Lead	MG/KG	365	401	9.86	10

KATALYST ANALYTICAL TECHNOLOGIES, INC.

08-05-98

FINAL CRDL STANDARD FOR ICP
Metals Analysis and Preparation (6010)
Project: 27209

Matrix: SOLIDS
QC Run: 05IB*1
Lab Batch ID: P42698

Analyte	Units	Concentration Spiked	Concentration Measured	Accuracy(%) Recovery
Lead	MG/KG	0.500	0.516	103

SAMPLE	SITE ID	ANALYTE	DIL	BATCH
27209*11	D-061-11	Lead	5	P42698
27209*20	C-061-1,2,3,4	Lead	5	P42698

REQUEST FOR ANALYSES TABLE/CHAIN-OF-CUSTODY RECORD

Laboratory:	Project Manager:	Project Number:
Katalyst ~~Environmental Science Engineering & Inc.~~	David Diamond	728598

Sampler(s): (signature) [signature] Patrick Johnston

Comments:
1 - Prepare leachate per TCLP, analyze for lead
2 - Prepare Leachate per CA-WET, analyze for lead
3 - preserve water samples to pH<2 with HNO_3, cool to 4°C
Preservative: cool all samples to 4°C for all analyses

	Sample ID	Date	Time	Matrix	No. of Containers	Composite No.	Holding Time	Pb by SW6010A (180 days)	TCLP - Lead[1] (180 days)	CA-WET - Lead[2] (180 days)	MS/MSD (180 days)	Laboratory Duplicate (180 days)	Turn Around Time (days)	Remarks
27204							METHOD							
#1	D-061-01	7/8/98	1000	Soil	1			X					STAT	
2	D-061-02		1000		1			X			X	X	STAT	
3	D-061-03		1221		1			X					STAT	
4	D-061-04		1025		1			X					STAT	
5	D-061-05		1207		1			X					STAT	
6	D-061-06		1152		1			X					STAT	
7	D-061-07		1130		1			X					STAT	
8	D-061-08		1125		1			X					STAT	
9	D-061-09		1145		1			X					STAT	
10	D-061-10		1229		1			X					STAT	
11	D-061-11		1045		1			X					STAT	
12	W-061-01		1255		1									Do not analyze hold for request
13	W-061-02		1244		1									Do not analyze hold for request
14	W-061-03		1020		1									Do not analyze hold for request
15	W-061-04		1245		1									Do not analyze hold for request
16	W-061-05		1203		1									Do not analyze hold for request
17	W-061-06		1115		1									Do not analyze hold for request
18	W-061-07		1105		1									Do not analyze hold for request
19	W-061-08		1030		1									Do not analyze hold for request
20	C-061-01		1050		1	A		X					STAT	
	C-061-02					A		X					STAT	
	C-061-03					A		X					STAT	
	C-061-04					A		X					STAT	

Ambient cooler temperature: _____ °C

Relinquished by: (signature)	Time:	Date:	Received by: (signature)	Remarks:
[signature]		7/8/98	Chris Oheard	7/9/98
Relinquished by: (signature)	Time:	Date:	Received by: (signature)	Remarks:
Relinquished by: (signature)	Time:	Date:	Received by: (signature)	Remarks:

Metals Analysis

ICAP Emission

Parsons Engineering Science, Inc.

2101 Webster St., Suite 700
Oakland, CA 94612

Client Number : 3812
Report Number: M030801
Date Received : 09/27/99
Date Analyzed : 09/28/99
Date Reported : 09/29/99

Purchase Order# :
Job ID # : 732483
Site :

Bulk (TTLC)

Final Report

Sample Number	Lab Num	Elem	Result	Units	*MRL	Reference
D-061-12	39926202	Pb	340	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-061-13	39926203	Pb	1200	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-061-14	39926204	Pb	450	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-061-15	39926205	Pb	770	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-061-16	39926206	Pb	420	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-061-17	39926207	Pb	700	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-061-18	39926208	Pb	690	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-061-19	39926209	Pb	940	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-061-20	39926210	Pb	400	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-061-21	39926211	Pb	910	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					
D-061-22	39926212	Pb	380	mg/Kg	20	EPA 6010A M
Comment:	Due to sample matrix, this result may not be repeatable.					

Richard Hale, Laboratory Supervisor

'MRL':Method Reporting Limit gives the lower limit of numerical reliability for this analytical method.

[illegible]al results and reports are generated by Forensic Anaytical at the request of and for the exclusive use of the person or entity (client) named on such report. Results, reports or [illegible]ples of same will not be released by Forensic Analytical to any third party without prior written consent from client. This report applies only to the sample(s) tested. Supporting laboratory documentation is available upon request. This report must not be reproduced except in full with approval from Forensic Analytical. The client is soley responsible for the use and interpretation of test results and reports requested from Forensic Analytical. This report must not be used by the client to claim product endorsement by NVLAP or any agency of the US Government. Forensic Analytical is not able to assess the degree of hazard resulting from materials analyzed. Forensic Analytical reserves the right to dispose of samples after a period of thirty days. The samples will be disposed of according to all state and federal guidelines.

San Francisco Office: 3777 Depot Road, Suite 409, Hayward, California 94545 - Telephone: 510/887-8828 800/827-FASI Fax: 510/887-4218
Los Angeles Office: 2959 Pacific Commerce Drive, Rancho Dominguez, California 90221 - Telephone: 310/763-2374 Fax: 310/763-8684

Metals Analysis

ICAP Emission

Parsons Engineering Science, Inc.

2101 Webster St., Suite 700
Oakland, CA 94612

Client Number : 3812
Report Number: M030801
Date Received : 09/27/99
Date Analyzed : 09/28/99
Date Reported : 09/29/99

Purchase Order# :
Job ID # : 732483
Site :

Bulk (TTLC)

Final Report

Sample Number	Lab Num	Elem	Result	Units	*MRL	Reference
D-061-23	39926213	Pb	350	mg/Kg	20	EPA 6010A M

Comment: Due to sample matrix, this result may not be repeatable.

Richard Hale

Richard Hale, Laboratory Supervisor

'MRL':Method Reporting Limit gives the lower limit of numerical reliability for this analytical method.

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San Francisco Office: 3777 Depot Road, Suite 409, Hayward, California 94545 - Telephone: 510/887-8828 800/827-FASI Fax: 510/887-4218
Los Angeles Office: 2959 Pacific Commerce Drive, Rancho Dominguez, California 90221 - Telephone: 310/763-2374 Fax: 310/763-8684

PARSONS ES

X3812

TABLE 5.3

Parsons Engineering Science, Inc
2101 Webster Street, 700
Oakland, CA 94612
(510) 891-9085 Fax (510) 835-4355

REQUEST FOR ANALYSES TABLE/CHAIN-OF-CUSTODY RECORD

Laboratory:	Project Manager:	Project Number:
orensic Analytical 3777 Depot Road, Ste 409 Hayward, CA 94545 510-887-8828 (Attn. Christine Wall)	David Diamond	732483.07010

Sampler(s): (signature) Anita Bielskis, Amanda Bielskis, David Diamond

Analyses Required

Comments:
1 - Prepare leachate per TCLP, analyze for lead
2 - Prepare Leachate per CA-WET, analyze for lead
3 - preserve water samples to pH<2 with HNO_3, cool to 4°C
Preservative: cool all samples to 4°C for all analyses

Sample ID	Date	Time	Matrix	No. of Containers	Composite No.	METHOD	Holding Time: Pb by SW6010A (180 days)	TCLP - Lead[1] (180 days)	CA-WET - Lead[2] (180 days)	MS/MSD (180 days)	Laboratory Duplicate (180 days)	Turn Around Time (days)	Remarks
D-061-12	9/24/99	1417	Soil	1			X					24hr	
D 061 13	"	1445	"	1			X					"	
D 061 14	"	1430	"	1			X					"	
D 061 15	"	1434	"	1			X					"	
D 061 16	"	1415	"	1			X					"	
D 061 17	"	1440	"	1			X					"	
D 061 18	"	1510	"	1			X					"	
D 061 19	"	1523	"	1			X					"	
D 061 20	"	1500	"	1			X					"	
D 061 21	"	1523	"	1			X					"	
061 22	"	1547	"	1			X					"	
D061 23	"	1550	"	1			X					"	

Ambient cooler temperature: _____ °C

Relinquished by: (signature)	Time:	Date:	Received by: (signature)	Remarks:
Anita Bielskis	1600	9/24/99	Herb Hudson	
Relinquished by: (signature)	Time:	Date:	Received by: (signature)	Remarks:
			[signature] 9/27/99	
Relinquished by: (signature)	Time:	Date:	Received by: (signature)	Remarks:

Cocbink.xls Blank
8/24/99

APPENDIX C

BACKGROUND DATA OBTAINED FROM ALAMEDA COUNTY LEAD POISONING PREVENTION PROGRAM (ACLPPP) ANALYSIS

Appendix C
Verdese Carter Park Project
AlliedSignal, Inc.

West Berkeley Background Data (Center Yard Samples Only)
Obtained from Alameda County Lead Poisoning Prevention Program (ACLPPP)

Project Number	Sample ID #	Soil Lead Concentration	Location	Ground Cover	Chips
10361	10361-07S	650	Center Yard	---	no
10354	10354-07Sa	402	Center Yard	bare	no
10332	10332-01	443	Center Yard	bare	no
10377	10377-2S	255	Center Yard	part	no
10376	10376-1	780	Center Yard	part	no
10388	10388-3S	425	Center Yard - back	part	no
10368	10368-2S	570	Center Yard - back	part	---
10370	10370-2S	651	Center Yard - back	part	yes
10379	10379-2S	307	Center Yard - back	part	no
10359	10359-09S	256	Center Yard - back yard	---	---
10397	10397-06S	562	Center Yard - back yard	bare	no
10357	10357-1S	255	Center Yard - back yard	bare	---
10359	10359-10S	527	Center Yard - back yard, garden	---	---
10347	10347-08S	1101	Center Yard - backyard	part	no
10442	10442-1S-07S	521	Center Yard - by retaining wall front	bare	---
10427	10427-1S	634	Center Yard - from A	part	no
10398	10398-9S	130	Center Yard - from yard A	part	no
10388	10388-2S	413	Center Yard - front	part	no
10359	10359-08S	108	Center Yard - front	part	---
10363	10363-07S	319	Center Yard - front	part	no
10379	10379-1S	794	Center Yard - front	part	no
10387	10387-4S	198	Center Yard - front	part	no
10365	10365-1S	12	Center Yard - front	part	no
10404	10404-06S	245	Center Yard - front (side A)	part	no
10330	10330-01	631	Center Yard - front from yard	bare	no
10347	10347-07S	834	Center Yard - front yard	part	no
10446	10446-01S	2077	Center Yard - front yard	part	---
10360	10360-07S	241	Center Yard - front yard	part	no
10398	10397-07S	1233	Center Yard - front yard	bare	no
10441	10441-3	684	Center Yard - garden	part	no
10441	10441-3	684	Center Yard - garden	part	no
10336	10336-2S	134	Center Yard - large exposed play	bare	---
10354	10354-08S	701	Center Yard - left face of the front house	bare	no
10371	10371-1S	522	Center Yard - rear	bare	no
10335	10335-3S	2160	Center Yard - rear fence (wall C)	part	no
10442	10442-2S-08S	775	Center Yard - rear of house	bare	---
10336	10336-3S	1817	Center Yard - right side	bare	---
10387	10387-3S	217	Center Yard - right side between fence & driveway	bare	no
10446	10446-02S	1077	Center Yard - side (B) yard	part	---
10372	10372-07S	218	Center Yard - side A	part	no
10389	10389-1S	118	Center Yard - side A (front)	part	no
10350	10350-05S	292	Center Yard - side A, front	part	---
10404	10404-07S	324	Center Yard - side B	---	---
10392	10392-2S	700	Center Yard - side B (cockwise)	part	no
10437	10437-09S	314	Center Yard - side B pile in left side in rear	bare	---

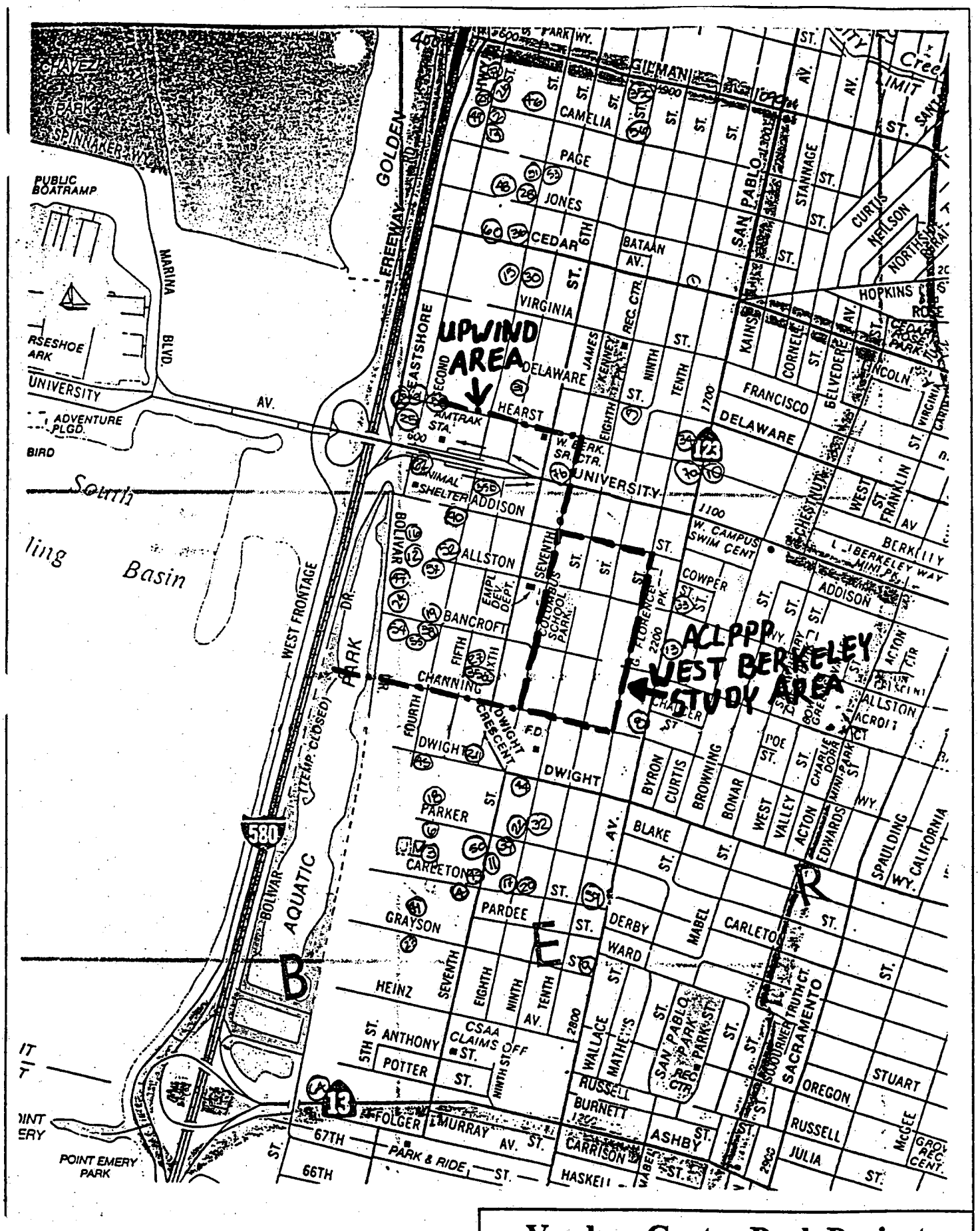
Appendix C
Verdese Carter Park Project
AlliedSignal, Inc.

West Berkeley Background Data (Center Yard Samples Only)
Obtained from Alameda County Lead Poisoning Prevention Program (ACLPPP)

Project Number	Sample ID #	Soil Lead Concentration	Location	Ground Cover	Chips
10437	10437-10S	1195	Center Yard - side B, vegtable garden rear	bare	---
10372	10372-09S	935	Center Yard - side C	all	no
10404	10404-08S	319	Center Yard - side C	---	---
10409	10408-2S	349	Center Yard - side C (back)	part	no
10409	10409-11S	3871	Center Yard - side C (back)	part	---
10411	10411-12S	197	Center Yard - side C vegetable	---	no
10446	10446-04S	968	Center Yard - side D	part	---
10410	10408-3S	1061	Center Yard - side D (right - clock)	part	yes
10409	10409-10S	1000	Center Yard - side D (side L)	part	---
10336	10336-2S	3800	Center Yard - side left	bare	---
10335	10335-1S	3126	Center Yard - under clothesline	part	no
10441	10441-1	394	Center Yard - wall B fence	bare	no
10441	10441-2	836	Center Yard - wall D fence	bare	no
10441	10441-1	394	Center Yard - wall to fence	bare	no
10441	10441-2	836	Center Yard - wall to fence	bare	no
	Note: "Chips" refers to observed presence or absence of paint chips in sample.				

APPENDIX D

COMPILATION OF HISTORICAL LEAD-USING FACILITIES NEAR THE WEST BERKELEY BACKGROUND AREA



Verdese Carter Park Project
AlliedSignal, Inc.

Historical Review of Potential Lead Sources

© PARSONS ENGINEERING SCIENCE, INC.

Verdese .r Park Project
ACLPPP West Berkeley Data Set
Historical Review of Potential Lead Sources

Facility Name	Map #	Address	Type of operation or Products	Date of First Listing	Date of Last Listing	Upwind Properties	Lead Contamination Potential
Dalton, Henry Dalton and Sons Co.	1	Cedar between 9th and 10th	Iron Works	1900	1918 (May have moved to Oakland in 1908)		Low
Berkeley Iron Works	2	2nd and Camelia		1909	1911		Low
Macauley Foundry Co. (H.C.)	3	6th & Carlton	Gray iron & aluminum castings	1925			Low
Byron Jackson Iron Works	4	Carleton Station, West Berkeley		1909	1913		Low
Berkeley Brass and Bronze Works	5	925 Delaware		1910			Medium
California Corrugated Culvert Co.	6	5th & Parker	Corrugated metal road culverts, metal flume, irrigation and drainage gates, metal farm	1925	1943		Low
Mork, Walter	7	1041 Hearst & San Pablo 844 University ('40-41)	Furnaces, sheet metal production, patenient chimneys	1925		X	Low
DeLuchi-Schufelt Co.	8	2332 San Pablo Ave.	Sheet Metal Works	1912	1915		Low
Loafea Sami	9	2700 San Pablo Ave.	Sheet Metal Works	1916	1918		Low
Olsen Ole	10	1826 San Pablo Ave.	Tool & Dye Manufacture	1917	1918		Low
Berkeley Brass Foundry Co.	11	2629 7th Street	Lead castings, brass, bronze and aluminum castings, nickel-silver castings	1925			Medium
John Lucas & Co., Inc.	12	2222 3rd Street	Paints, varnishes, dry colors, insecticides, putty	1925	1931	X	Medium
Bell JL	13	2244 San Pablo Ave.	Sheet Metal Works	1924	1924		Low
Berkeley Steel Construction Co., Inc.	14	2nd and Camelia	Tanks, boilers and smoke stacks	1925	1926		Low
B.B. Foundry	15	1609 4th Street ('47) 1623 4th street ('51)	Gray iron & aluminum castings	1938			Low
Solano Iron Works	16	Allston & 3rd	Steel Castings	1925		X	Low

Verdese[illegible]ter Park Project
ACLPPP West Berkeley Data Set
Historical Review of Potential Lead Sources

Facility Name	Map #	Address	Type of operation or Products	Date of First Listing	Date of Last Listing	Upwind Properties	Lead Contamination Potential
The Threaded Products Co.	17	8th & Carlton	Fresno scrappers. Tractor scrapers, road machinery, agricultural implements, hay forks, seed sowers, swinging drawbars	1925	1931		Low
Bunting Iron Works	18	5th & Parker	Simplex fuel oil burners, mining concentrating machinery	1925	1931	.	Low
Oakland Furnace & Foundry Co.	19	Bancroft & 4th	Reliance warm air furnaces, gray iron castings, basket grates	1925	1931	X	Low
Standard Die & Specialty Co. of California	20	8th & Carlton	Tools, dies, jigs, fixtures	1925	1931		Low
Kowal Brothers (Mfg. co)	21	2411-2412 6th	Tools, dies, bakelite, porcelain, drop forge, cutting and forming, special machines, metal stamping	1925			Low
Johnson Gear Co. and Mfg. Co.	22	8th & Parker 921 Parker	Gear Service, machine work, parts machine tooled products, case hardening	1925			Low
West Coast Kalsomine Co.	23	5th & Grayson	Kalsomine, Cold water paints, whitening, graphite, earth colors	1925	1939	.	Low
Glidden Paint Co.	24	Third & Bancroft				X	Medium
Moore, George A.	25	615 University	Graphite, Foundry facings	1926	1931	X	Low
Electric Steel Foundry Co., Inc.	26	1328 2nd Street	Steel castings foundry, light steel and alloy steel	1927	1931		Low
Fuller-Watterson	27	2326 5th Street	Paints, varnishes	1927	1931	X	Medium
Columbia Wood & Metal	28	4th & Jones 1465 4th Street	Deck & hull, paint, shingle & felt, tile	1927	1943		Medium
Woolenius Tiles Co. inc.	29	1315 2nd Street	Burnt clay art tiles, terra cotta, mantel, floor tile, polycrome	1927	1943		Low
Ace Foundry	30	1623 4th Street	Gray iron casting	1931	1936		Low
Greene Manufacturing Co.	31	1821 5th Street	Iron and steel castings, deep well strainers, vises, mine cars, brass, adjustable angle plates and borings	1931			Low
Kawneer Mfg. Co.	32	8th & Parker 2547 8th Street	Rustless metal store fronts, hollow metal windows, architectural castings, drawn steel	1931			Low

Verdese [illegible] Park Project
ACLPPP West Berkeley Data Set
Historical Review of Potential Lead Sources

Facility Name	Map #	Address	Type of operation or Products	Date of First Listing	Date of Last Listing	Upwind Properties	Lead Contamination Potential
San Pablo Brass Works	33	2102 San Pablo Ave	Plumbers' Brass and supplies, brass workers supplies, sheet metal works	1931	1932		Medium
Royal Battery Mfg. Co., Ltd	34	1826 San Pablo	Storage Batteries	1931	1932		High
Fuller-Clarkson Co.	35	2326 5th Street ('31) 2039 4th Street ('40-'41) 801 Gilman ('42-43)	Paints, enamels, varnishes, polishes, marine paint, tires	1931	1944	X	Medium
Pacific Paint & Varnish Co.	36	4th & Cedar	Paints, enamels, varnishes	1931			Medium
Pacific Steel Castin Co.	37	1328 2nd Street 1316 2nd Street ('40-41) 1333 2nd Street ('47)	Light steel castings, small, med carbon alloy, pressure and intricate steel castings	1935			Low
Simonds, F.K., Co	38	4th Street & Bancroft	Heating furnaces, basket grates, light iron castings, gray iron castings	1935	1944	X	Low
Pan American Engineering Company	39	820 Parker	Industrial and domestic oil burners, mining and drilling machinery, flotation machinery, jigs, drill cleaners, ore testing apparatus	1935			Low
Irwin Paint Co.	40	4th & Addison ('42-'43)	Paints, enamels, varnishes	1940		X	Medium
Westco Water paints, inc.	41	5th & Grayson	Earth colors, cold water paints, kalsomine, whitening	1936			Low
Tri-City Paint	42	2003 University ('42-'43) 1220 4th Street ('47)	Paints, varnishes, enamels, paper	1942			Medium
Columbia Machine Works	43	7th & Carlton	Marine Parts	1947			Low
Production Engineering Co.	44	940 Dwight Way	Power tools for home, crafts small machine tools, flush valves	1943			Low
Sierra machine Co.	45	733 Dwight Way ('31)	Sump pumps, generator machines, (ammonia refrigeration)	1927			Low

Verdese[illegible]er Park Project
ACLPPP West Berkeley Data Set
Historical Review of Potential Lead Sources

Facility Name	Map #	Address	Type of operation or Products	Date of First Listing	Date of Last Listing	Upwind Properties	Lead Contamination Potential
California Ink Company, Inc. Changed name to Tenneco in 1973	46	711 Camelia Street	Printing, paint materials including pigments.	1947			Medium
Triangle Paint Co.	47	2222 3rd Street	Paints, varnishes, enamels, industrial finishes	1947		X	Medium
Rufcraft Inc.	48	707 Jones Street	Builders hardware (brass, bronze & aluminum), non ferrous	1951			Medium
Berkeley Forge & Tool	49	1330 2nd Street	General blacksmith, tools, machine alloy	1951			Low
Armco Drainage & metal products Inc., Calco Div	50	2600 7th Street	Culverts, spiral welded pipe, irrigation system and equipment	1951			Low
Benda Tool and Model Works	51	1444 4th Street	Dies, punch press, die casting	1955			Low
SKS Die Casting Co. (later became a Division of Wittaker)	52	739 Allston Street 2200 4th Street ('71)	Die casting, all non-ferrous metals	1955		X	Medium
A & B Die Casting	53	1444 4th Street	Die Casting	1958			Low
Engineered Alloy Foundry Co.	54	703 Bancroft	Machinable & Nickel hard iron casting	1961		X	Low
Joost Mfg. Co.	55	742 Bancroft	Pruning shears, hay hooks (and hooks of all kinds), commercial drop forging	1961		X	Low
Ferry Battery	56	1348 7th Street	Car, truck and marine storage battery	1955			High
Flecto Co. Inc.	57	805 Allston	Varnish, enamel, auto paint	1951		X	Medium
Industrial Chemicals, Co.	58	610 Hearst	Lacquers, thinners, enamel	1951		X	Medium
Star Paint Co.	59	1035 Carlton	Starlite paints	1951			Medium
Thompson, A.H.	60	3rd & Cedar	Industrial paints, lacquer, synthetic	1955			Medium
Dowman Production Inc.	61	611 Hearst	Fixall, 3T, joint filler, water paints	1964		X	Low

Verdes. ıer Park Project
ACLPPP West Berkeley Data Set
Historical Review of Potential Lead Sources

Facility Name	Map #	Address	Type of operation or Products	Date of First Listing	Date of Last Listing	Upwind Properties	Lead Contamination Potential
Willis-Moore Paint Specialties Inc.	62	1920 2nd Street	Paint Specialties, sundries	1967		X	Medium
Ferrous Metals, Inc.	63	636 Hearst	Metallic hardeners & powders	1967		X	Medium
Airco Vacuum Metals, Division of Airco	64	735 Ashby	Stainless Steel	1970			Low

Note: 42 is outside of mapped area.

APPENDIX E

SUPPLEMENTAL SAMPLING PLAN FOR PARCEL 61

PARSONS ENGINEERING SCIENCE, INC.

Post-it® Fax Note 7671	Date 9/17/99	# of pages ▶ 3
To Alana Lee	From Dave Diamond	
Co./Dept. EPA	Co. Parsons	
Phone # 415-744-2217	Phone # 510/[illegible]	
Fax # 415-744-1796	Fax # 510/235-4355	

Memorandum

DATE: September 17, 1999

TO: Alana Lee

FROM: Dave Diamond

RE: Parcel 61 Resampling Locations

CC: Keith Bowers

Alana:

Attached is a sketch map of the back yard of Property 61. Our understanding is that according to the property owner), potentially contaminated soil from the front yard was excavated and may have been placed in two areas in the back yard (in a lawn area surrounding a tree in the center of the yard, and in a bare soil stockpile at the back of the yard). Since this excavation was conducted prior to Parsons Phase 3 SI sampling, and Parsons had apparently not sampled these areas, there is some question as to whether Parsons sampling of the backyard is representative of current lead levels. Therefore, the proposed resampling of that property has two objectives:

1. To evaluate whether potentially contaminated soil removed from the front yard and purportedly spread on the surface in the vicinity of a large tree in the back yard (near grid squares 3, 4 and 5 on the map) has resulted in high lead levels in areas not previously sampled by Parsons.

2. To evaluate whether a soil stockpile in the back of the property was placed prior to Parsons prior sampling event, and if so, to determine whether it contains elevated levels of lead.

To meet these objectives, Parsons will conduct the following sampling tasks:

1. Collect samples from the gridded area shown on the attached map using a systematic random sampling technique. The same method as described in the SI Workplan was used for preparing the sampling grid, except that a smaller 10 foot grid was used in lieu of a 15 foot grid. One sample will be collected from each grid square, based on a randomly selected coordinate within each grid square. A 5-foot perimeter surrounding the concrete pad/ truck storage area behind the garage was excluded from the sampling area because the pad is heavily stained with oil apparently derived from vehicle maintenance activities. Runoff from the pad is likely to contain lead derived from used oil, so may bias sampling results in that area. The sample coordinates for each grid square are presented in the attached table, and were generated using the random number generator incorporated into Microsoft Excel. For grid squares 2, and 6, which intersect the excluded area, several random number generation iterations

were needed to generate a coordinate that lay within the sampling area. For grid squares where an existing sample is located, the existing sample result will be used. These gridded sampling data will be compared with background data.

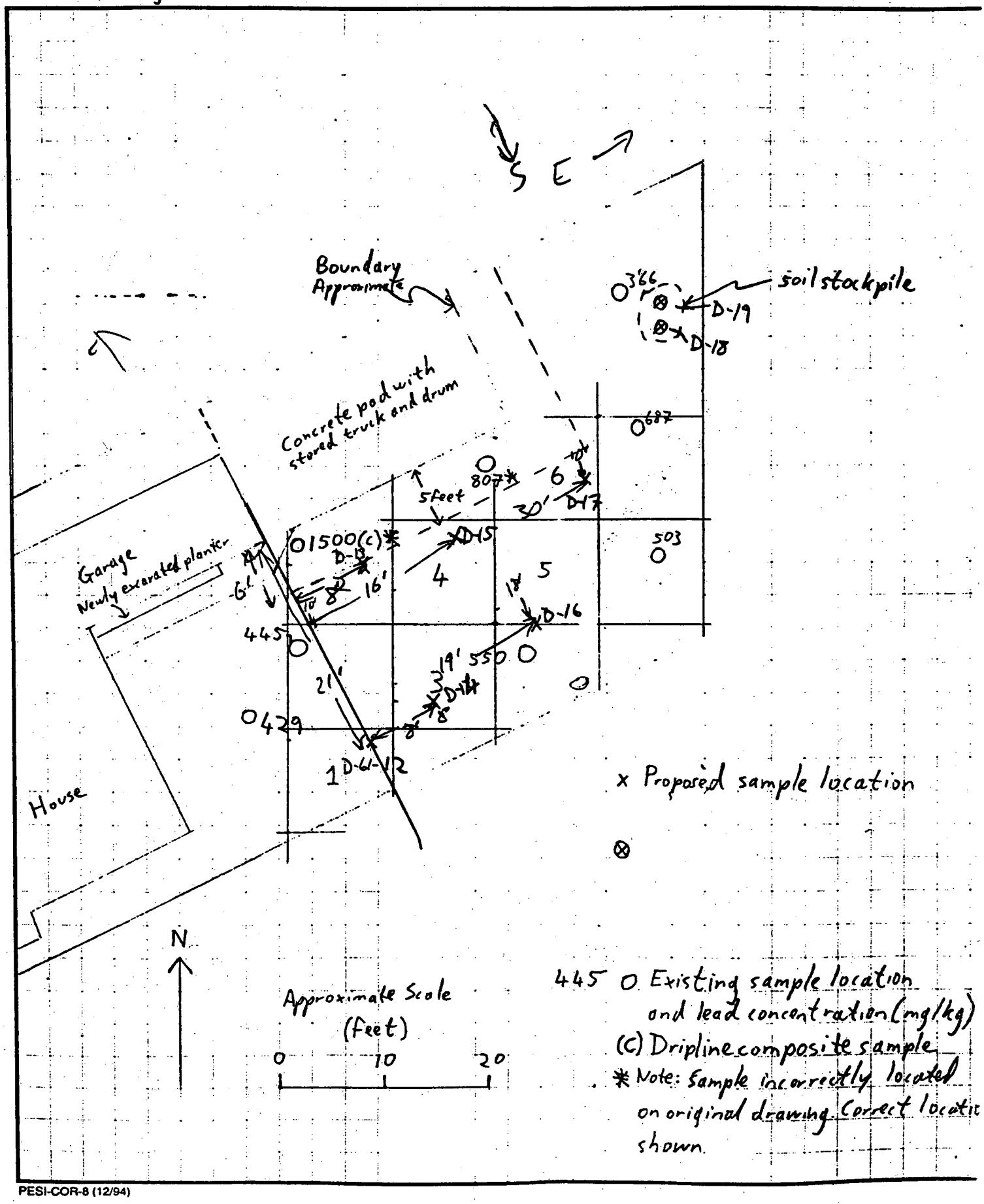
2. The soil stockpile lacks vegetation, and is apparently absent on Parsons Phase 3 SI sampling photos. In addition, there is evidence of recent excavations within dripline areas of the property, and uncertainty on the part of the property owner regarding where that dripline soil was placed. For these reasons, it has not been established whether the soil stockpile represents soil excavated from the front yard prior to Phase 3 SI sampling, or whether it may represent soil derived from the recent dripline excavations or is from other unknown sources, and has been stockpiled subsequent to Phase 3 SI sampling. Therefore, the following scope is proposed. Parsons will visit the site and compare the soil stockpile with Phase 3 SI sampling photographs. If it is apparent that the soil stockpile clearly postdates the photographs, no stockpile sampling will be conducted because this would indicate that the soil was not derived from the front yard. If the soil stockpile either predates the photographs, or the interpretation is ambiguous, then two samples will be collected from within the stockpile to determine whether the stockpile contains elevated lead concentrations. EPA concurrence will be sought on interpretation of the sampling photographs.

PARSONS ENGINEERING SCIENCE, INC.

Client: Allied Signal, Inc. | Job No. 732483 | Sheet 1 of 1

Subject: Parcel 61, Resampling Plan | By: Dave Diamond | Date: 9/17/99

Checked: | Rev.:



PESI-COR-8 (12/94)

APPENDIX F

GLOSSARY OF STATISTICAL TERMS

APPENDIX F
GLOSSARY OF STATISTICAL TERMS

Confidence Interval. The confidence interval on the geometric mean is an estimated range of values which is likely to include the actual geometric mean (i.e., the geometric mean of the population). The confidence interval is calculated from a given set of sample data. The wider the confidence interval on the geometric mean is, the less certain we are about what the actual geometric mean (i.e., the population mean) is. A very wide interval may indicate that more data should be collected before anything very definite can be said about the mean.

Confidence intervals are calculated for different confidence levels, depending on how precise we want to be. We interpret an interval calculated at a 95 percent level as, we are 95 percent confident that the confidence interval contains the true population mean.

Confidence Limit on the Geometric Mean. Confidence limits are the lower and upper boundaries/values of a confidence interval, that is, the values which define the range of a confidence interval.

Geometric Mean. A statistic calculated by multiplying n data values together and taking the nth root of the result. It is often used as a measure of central tendency for positively skewed distributions that are common for environmental sampling data. The geometric mean may also be calculated by computing the arithmetic mean of the logarithms of the data values and taking the inverse logarithm of the result. The geometric mean is a measure of the central tendency of a log-normal distribution.

Log-Normal Distribution. A distribution in which the logarithms of the data values follow a normal distribution. Environmental sampling data sets commonly follow a log-normal distribution, therefore statistical tests of such data sets are commonly conducted on the logarithms of the data values.

Mean. The mean, synonymous with the average, is a statistic which measures the center of a sample of data by adding up the observations and dividing by the number of data points. It may be thought of as the center of mass or balancing point for the data, i.e., that point at which a ruler would balance if all the data values were placed along it at their appropriate numerical values. However, Unlike the sample median, outliers (i.e., a small number of very low or very high values) can have a large impact on the calculated sample mean. The mean may be a poor measure of the center of a sample of data where the data do not follow a normal distribution.

Median. The median is the value halfway through the ordered data set, below and above which there lies an equal number of data values.

Normal Distribution. A particular form for the distribution of a group of measurements which, when plotted, produces a symmetrical curve, rising smoothly from a small number of cases at both extremes to a large number of cases in the middle. Not all symmetrical distributions meet the definition of normality. The normal distribution is used to characterize a wide variety of types of data and is particularly important in statistics because of the tendency for sample means to follow the normal distribution.

The normal is also known as the Gaussian distribution after its originator, Frederich Gauss.

Null Hypothesis. A null hypothesis is used for a statistical test based on a sample of data to determine which of two different states of nature is true. The two states of nature are commonly called the null hypothesis, which gets the benefit of the doubt, and the alternative hypothesis. For example, as applied to the t-tests (see t-test) of the Verdese Carter Park Properties, the null hypothesis was that the property had lead concentrations less than or equal to background. The alternative hypothesis was that the property had lead concentrations greater than background..

Percentile. Percentiles are values that divide a sample of data into one hundred groups containing (as far as possible) equal numbers of observations. For example, 75 percent of the data values lie below the 75th percentile.

Population. A population is any entire collection of people, animals, plants or things from which we may collect data. It is the entire group we are interested in, which we wish to describe or draw conclusions about. In the case of a property at Verdese Carter Park, it is the set of all possible surface soil lead samples that could be collected at the property.

Probability. A probability provides a quantitative description of the likely occurrence of a particular event. Probability is conventionally expressed on a scale from 0 to 1 (or 0 to 100 percent); a rare event has a probability close to 0, a very common event has a probability close to 1 (100 percent).

Significance Level (for t-test). The significance level is the probability of a statistical test (i.e., t-test) wrongly rejecting the null hypothesis (see Null Hypothesis), if it is in fact true. It is thus the probability of accepting the alternative hypothesis when the null hypothesis is true. For example, as applied to t-tests of the Verdese Carter Park Phase 3 properties, a 5 percent significance level means that there is a 5 percent probability that lead concentrations at a property appear to exceed background concentrations, when in fact they are less than or equal to background.

T-Test. A one sample t-test is a hypothesis test for answering questions about the mean where the data are a random sample of independent observations from an underlying normal distribution. As applied to Verdese Carter Park Phase 3 properties, t-tests were used to evaluate whether the mean of the soil lead concentrations at each property exceeded the mean of the background area soil lead concentrations.

ATTACHMENT A

TECHNICAL MEMORANDA – BOILERPLATE TEXT

1. Introduction

1.1 General

This Site Inspection Technical Memorandum (TM) describes the results and conclusions of a Site Inspection (SI) study that was conducted at «Address» near the Verdese Carter Park site in Oakland, California. A lead battery factory formerly occupied the Verdese Carter Park site. The SI study primarily consisted of collection and analysis of surface soil samples to evaluate the extent of lead present in soil at residential properties in the vicinity of the former battery factory site.

The soil sampling work has been conducted under the oversight of the U.S. Environmental Protection Agency (USEPA) Region IX. Honeywell International, Inc. (Honeywell, formerly AlliedSignal) is participating in the remedial action, and has retained Parsons Engineering Science, Inc. (Parsons) to coordinate sampling, analysis, and oversight of any needed soil removal activities. Both Katalyst Laboratories (Katalyst; formerly ESE Laboratories) and Forensic Analytical were retained to conduct laboratory analyses.

1.2 Objectives

The objectives of the Site Inspection (SI) were to:

1. Review and interpret soil lead sampling data previously collected by USEPA contractors.

2. Supplement the previously collected USEPA surface soil lead concentration data to assess the regional magnitude and extent of surface soil lead in the vicinity of the former battery factory.

3. Evaluate the degree to which surface soil lead may be a result of lead dust emissions from the former battery factory. This evaluation is based on both a comparison of neighborhood lead concentrations with a similar "background area" in west Berkeley, and a review of the overall distribution of lead in the Verdese Carter Park neighborhood.

4. Evaluate the need for, and extent of, soil removal to be conducted at each property where background comparisons indicate a probable contribution of lead from the former battery factory. The samples collected to achieve this objective are referred to as "delineation yard samples."

5. Evaluate lead concentrations on areas of the Phase 3 properties that may have received lead from multiple sources (i.e. lead-based paint, battery factory emissions, and automobile emissions). These areas generally lie adjacent to painted structures (houses, garages, fences). Samples collected to evaluate these areas often lie within the dripline of the roof, and so are referred to as "delineation dripline samples".

1.3 General Site Information

1.3.1 Lead Sources

The Verdese Carter Park Project described in this TM was initiated primarily to address possible lead contamination associated with the former Prestolite battery factory situated in the southeast half of the park. However, multiple potential past and present sources of surface soil lead exist in the Verdese Carter Park area. The most widespread of these sources are the following, and are discussed in further detail in the SI Workplan (Parsons 1997):

- Naturally occurring lead exists in the soil at low concentrations (generally less than 50 milligrams per kilogram (mg/kg; equivalent to parts per million [ppm])
- Automobile emissions deposited lead throughout urban areas prior to the abolition of leaded fuels in the mid-1980s. Therefore, essentially all surface soil in urban areas of Oakland, particularly near major traffic arteries (e.g. 98th Avenue), has lead concentrations elevated above natural background levels. Regional studies show that surface-soil lead concentrations apparently associated primarily with automobile emissions are typically several hundred mg/kg over broad urban areas of Oakland and Berkeley.
- Lead-based paint was used on most older (i.e. built prior to 1970) painted structures (e.g. homes, garages, fences, painted sidewalks). Therefore, surface soil close to most older structures (or in places where older structures previously existed) has elevated lead concentrations due to past scraping and wearing away of paint. Surface-soil lead concentrations close to buildings and other painted structures (e.g. fences, painted paving) are highly variable, and generally range from several hundred to several thousand mg/kg in older urban flatland areas of Oakland and Berkeley.
- Battery factory air emissions from rooftop vents and a stack may have deposited lead dust into surface soil while the battery factory was operating (between 1923 and 1975). Deposition would have occurred primarily downwind of the factory, which was located in the southeast half of Verdese Carter Park. The wind predominantly blows to the east, although air modelling results (Parsons, 1997, 1998b) also suggest a seasonal northward component.

1.3.2 Previous Sampling and Cleanup Work

Park and School Cleanups

- Between 1976 and 1995, soil sampling and soil removal occurred at both Verdese Carter Park and at E. Morris Cox school.
- The work at the park resulted in cleanup of arsenic that was found in the imported gravel used for building the park;, and, lead from the battery factory.

- The work at the school resulted in cleanup of lead derived from various sources, as described above under "Lead Sources".
- The cleanup is now complete at both the park and school.

Phase 1 and 2 Residential Sampling and Cleanups

- In 1995, USEPA conducted preliminary sampling for lead in both soil and paint at homes surrounding Verdese Carter Park, and found high levels of lead in soil and/or paint at some homes.
- USEPA then proposed that soil be removed in two phases (Phases 1 and 2) from the 28 properties where the average lead concentrations in soil samples was greater than approximately 1,000 parts per million.
- During 1996, soil was removed from all Phase 1 and 2 properties where property owners agreed to have the work conducted. The work was funded by AlliedSignal, Inc., and was conducted by AlliedSignal contractors.
- USEPA also proposed sampling for, and cleanup of, other lead hazards (primarily lead-based paint) at the 28 Phase 1 and 2 homes. This work has been conducted by the Alameda County Lead Poisoning Prevention Program (ACLPPP) at properties where owners have applied to ACLPPP for services.

1.3.3 Phase 3 Residential Sampling

In 1997, USEPA requested that sampling be conducted at approximately 57 additional properties in the neighborhood. The properties selected for this additional sampling phase were chosen because they were either: (1) just outside the area previously sampled, but within areas that may have received airborne lead dust, or; (2) inside the area previously sampled, but did not have sufficient sampling data to determine whether or not cleanup was needed. This sampling phase is referred to as Phase 3, and was conducted to:

- Find out which parts of the overall neighborhood may have received lead dust from the battery factory.
- Determine whether cleanup is needed at any of the Phase 3 properties.

Sampling was conducted at 49 of the 57 properties. The remaining 8 properties were not sampled because access permission was not granted by the owners.

1.3.4 Further Information

More detailed information about the Verdese Carter Park Project may be obtained from the following Parsons' reports, and from other documents in the USEPA Administrative Record. The following information is available for review at the USEPA Superfund Records Center at 95 Hawthorne Street in San Francisco:

- Removal Site Inspection (RSI) Workplan (Parsons 1996a). This report describes soil sampling activities at properties slated for a two-phase (Phase 1 and Phase 2) time-critical soil removal action.

- Quality Assurance Project Plan (QAPP) (Parsons 1996c). This report describes data quality assessment criteria and laboratory quality control procedures for all project sampling activities.

- Site Safety and Health Plan (SSHP) (Parsons 1996b). This report governs safety- and health-related requirements and procedures for conducting project fieldwork.

- Property-specific RSI Technical Memoranda for the Phase 1 and Phase 2 soil removal action properties (Parsons 1996d). The Technical Memoranda describe RSI sampling results and give recommendations for soil removal areas at each property.

- Removal Action (RA) Workplan (Parsons 1996e). This report describes the procedures to be used for conducting the Phase 1 and Phase 2 soil removals.

- Data Quality Assessment Reports Nos. 1, 2, and 3 (Parsons 1996f, 1996g, 1996h). These reports describe data quality parameters associated with data collected during the RSI and RA project phases.

- Final Site Inspection (SI) Workplan (Parsons 1997). This report describes proposed soil sampling activities at properties that were either not evaluated during Phases 1 and 2, or showed lower soil lead concentrations than Phase 1 and 2 properties.

- Data Quality Assessment Report No. 4 (Parsons 1998a). This report describes data quality parameters associated with data collected during the Phase 3 SI project main phase.

- Draft Final SI Report (Parsons 1998b). This report describes the combined results of soil sampling conducted during Phases 1, 2 and 3 and presents recommendations for cleanup at Phase 3 properties.

- Site Inspection Report Addendum for Phase 3 Properties (Parsons 2000). This report describes additions and revisions to the Draft Final SI Report and includes the Data Quality Assessment Report No. 5 associated with these additions and revisions.

2. Field Sampling

All field sampling methods for SI samples were conducted in accordance with procedures described in the following publicly available documents:

- Final Site Inspection Workplan (SI Workplan), which describes pre-existing sampling data and sampling methods (Parsons 1997)

- Quality Assurance Project Plan (QAPP), which describes data quality assessment criteria and laboratory quality control procedures (Parsons 1996c)

- Site Safety and Health Plan (SSHP), which governs safety- and health-related requirements and procedures for conducting project fieldwork (Parsons 1996b).

These documents are publicly available at the USEPA Superfund Records Center in San Francisco. Specific sampling methods are briefly summarized below.

2.1 Delineation Samples

Delineation samples are surface soil samples collected to define the lateral extent of surface soil contamination. USEPA contractors previously collected delineation samples at some properties. However, additional samples were collected at SI properties because either no USEPA samples were collected, or an insufficient number of USEPA samples were collected to accurately determine property-wide lead concentrations. Two different categories of delineation samples were collected:

Delineation *yard* samples are the primary samples used in the SI study, and were all collected at distances greater than 5 feet from building walls to minimize the effects of lead-based paint. It is assumed for this study that the lead concentrations measured in these samples primarily reflect sources other than lead-based paint (i.e. fallout from past automobile and battery factory emissions). However, it should be noted that results from these samples are likely to show some degree of impact from lead-based paint, because past flaking, peeling, or paint removal activities may have caused paint particles to be deposited more than 5 feet from the walls. In addition, yard samples were in many cases collected along fencelines (which are now, or were formerly, occupied by painted fences), patios and paved walkways. Some of these features are now, or have in the past been painted with lead-based paint.

Delineation *dripline* samples (so called because they generally lie within the dripline of the roof) are samples that were collected within 5 feet of building walls. Since these samples commonly contain substantial amounts of lead from past removal, flaking and peeling of lead-based paint, which is mixed with lead from other sources, they are not directly used in evaluating whether battery factory emissions may have impacted the properties. Rather, they are used primarily for helping to evaluate the degree to which the dripline areas, and any nearby delineation *yard* samples, may have been impacted by lead-based paint.

2.1.1 USEPA Samples

At some SI properties, delineation samples were collected by USEPA contractors prior to the SI study, and are described in the SI Workplan. If USEPA samples were collected at the property described in this report, they are shown on Figure A-«Property_No»-1 and Table A-«Property_No»-1 (Appendix A). These samples were collected from both within and outside dripline areas, and were generally collected from the interval of 0 to 3" bgs after removing surface vegetation (Mike Bellot [USEPA], 1996, personal communication).

2.1.2 SI Samples

Delineation samples collected by Parsons during the SI were primarily collected from non-dripline areas, and in areas where no prior samples had been collected. All samples were

collected from the interval of 0 to 3" bgs after removing surface vegetation. Samples collected by Parsons in dripline areas were primarily composite samples, whereby soil from four individual field samples is mixed together, then a single laboratory analysis for lead is conducted on the mixture.

3. Analytical Results

3.1 Delineation Samples

All delineation sample results are shown in Figure A-«Property_No»-1 and Table A-«Property_No»-1 (Appendix A). Results are given in mg/kg (ppm) lead on a dry weight basis.

3.1.1 USEPA Samples

All USEPA samples were reportedly homogenized in the field (Mike Bellot [USEPA] 1996, personal communication), then analyzed for total lead using an X-Ray Fluorescence screening method. The analytical reports for those samples are referenced in the RSI Workplan. Note that sample locations shown for USEPA samples generally were less accurately located than subsequent samples, so the sample locations shown on Figure A-«Property_No»-1 for these samples (if any) are only approximate.

3.1.2 SI Samples

All Parsons SI samples were homogenized in the field, then analyzed by either Katalyst laboratory or Forensic Analytical for total lead using USEPA-approved method 6010. The analytical reports and associated request-for-analysis and chain-of-custody forms are presented in Appendix B.

4. Data Quality

To ensure that the reported lead concentrations are accurate and precise, various additional quality control (QC) samples were analyzed for lead. The following section briefly describes the types of QC samples used for this project. These QC samples and their purpose are more fully described in the Quality Assurance Project Plan and the SI Workplan that were prepared prior to performing any field or laboratory work.

4.1 SI Samples

A Data Quality Assessment Report (Parsons 1998a) describes the validation results for all laboratory generated data. The data quality assessment findings for this property are discussed below.

Duplicates

Field duplicates are used to determine whether field sampling methods are consistent. After the required amount of soil is collected at a sample location, the soil is mixed thoroughly and divided between two containers. One sample becomes the primary sample and the other a duplicate. Both are submitted to the laboratory for analysis using a sample identification system that does not distinguish the duplicate sample from the primary sample. Thus the laboratory cannot distinguish which samples are duplicates and can have no knowledge of which primary sample is associated with which duplicate. Field duplicates were collected at a frequency of one per 10 primary samples, with at least one collected at each property. Duplicate sample results are shown on Figure A-«Property_No»-1 as sample locations that have two associated concentration values.

USEPA collected additional duplicate samples for a number of SI delineation samples collected from the Phase 3 properties. The purpose of these USEPA duplicate samples was to provide an independent assessment of the reproducibility and comparability of the analytical results although these data were not a formal part of the quality assurance procedures specified for this project. Therefore, the USEPA duplicate results are not shown on the figures, and comparison of the USEPA duplicates with the laboratory analytical samples collected by Parsons should be viewed only as a qualitative comparison of two independent analysis programs. A comparison between Parsons confirmation sampling laboratory results and the USEPA duplicate results for the entire Phase 3 Site Inspection is presented in Appendix D. With few exceptions, these duplicate samples showed that analytical results were reproducible within the limits set by the Quality Assurance Project Plan for the Parsons duplicates.

Field Blanks

Field blanks are used to determine whether sampling equipment is adequately cleaned between samples. After collecting a sample, the sampling tools (trowels, drive samplers, bowls) are cleaned using the standard procedures and then rinsed with lead-free water. This water is collected, placed in a polyethylene bottle, and sent to the laboratory for analysis. Field blanks were collected at a frequency of one per day. No lead was detected in any field blanks collected during the sampling, indicating that sampling equipment was adequately cleaned.

PE Samples

Performance evaluation (PE) samples are used to test the accuracy of the laboratory methods and equipment. Commercially available samples were purchased from a source recommended by USEPA containing known concentrations of lead (in this case 590 and 640 mg/kg [ppm]). PE samples were periodically submitted to the laboratory with the delineation soil samples. The sample identification system used for the PE samples was designed so that the laboratory could not distinguish between PE samples and delineation samples. Two PE

samples have been submitted and analyzed to date during Phase 3 delineation sampling. Both PE sample analyses were within the control limits specified by the manufacturer.

Laboratory Quality Control

Data validation was performed on field samples by reviewing the reported laboratory quality control data as described in the Final Quality Assurance Project Plan (Parsons 1996c).

Precision

Precision is the measure of variability between multiple measurements of the same sample, under prescribed conditions. For this project, laboratory precision is assessed by analyzing laboratory duplicate samples, which are field samples that are split into two separate duplicate samples by the laboratory. These duplicate samples are in addition to the field duplicates described above. The agreement of duplicate analyses, when expressed in terms of relative percent difference (RPD), indicates satisfactory precision in a measurement system. The analytical precision for samples collected on this property is discussed in the summary section below.

Accuracy

Accuracy is the degree of agreement between a measurement and an accepted reference or true value. For this project, laboratory accuracy is assessed by analyzing various types of spiked samples. Spiked samples are samples to which a known amount of lead has been added. After introducing a known amount of lead into a spiked sample, the sample is analyzed and the amount of lead is measured. By expressing the amount of lead measured in terms of percent recovery (%R), the accuracy of the method is determined. The analytical accuracy for samples collected on this property is discussed in the summary section below.

Representativeness

Representativeness expresses the extent to which data collected from environmental samples define site contamination. Representativeness is achieved by reducing the potential for false positive or false negative results by preparing and following a sampling and analysis plan that specifies how to properly locate, collect, handle and analyze samples. All samples were located, collected, handled and analyzed as specified in the SI Workplan (Parsons 1997) and QAPP (Parsons 1996c), which constitute the sampling and analysis plan for the property.

Comparability

Comparability expresses the confidence with which one data set can be compared to another. By following standardized sample collection, sample analysis, and sample reporting protocols the results of analyses can be compared with analyses by other laboratories and/or with analyses for other sites. There were some differences between sampling and analysis methods used for the USEPA delineation samples and the SI delineation samples. However, qualitative evaluation of the separate data sets indicates that similar results were obtained.

Completeness

Completeness is the amount of usable (non-rejected) data relative to the number of environmental samples collected and analyzed. Completeness is calculated as a percent by dividing the total number of usable data points by the total number of data points generated.

4.2 Data Quality Summary

4.2.1 SI Samples

«Quality_Summary»

4.2.2 USEPA Samples

Data quality for delineation samples collected by USEPA contractors is described in the RSI Workplan (Parsons 1996a) and documents referenced therein. In general, analytical data quality objectives were met for those data. However, it should be noted that sampling representativeness and comparability for some of those data were lower than for the RSI samples because sample locations were not accurately recorded in all cases.

5. Data Interpretation

A detailed description of the data interpretation methods used for this study is given in the SI Report (Parsons 1998b) and SI Report Addendum (Parsons 2000). The following briefly summarizes the information provided in those reports:

5.1.1 Background Area

As discussed in Section 1.3.1, lead from natural sources, lead-based paint, and automobile emissions is present in soil at this property, as in many other urban neighborhoods. To evaluate whether lead from the former battery factory was also deposited in the soil at this property, the soil sampling data were compared with soil lead concentrations measured in another neighborhood that is of similar age and character to the Verdese Carter Park area, but which has not been situated near a battery factory site or other major industrial lead source. Two areas were tentatively selected for comparison with the Verdese Carter Park area (Figure 1). One of these areas is located in the Fruitvale District of Oakland, and was the site of an earlier residential soil lead study conducted by the California Department of Health Services (DHS) in three cities during the late 1980s and early 1990s. The second area is located in west Berkeley, and was the site of residential soil lead sampling conducted by the Alameda County Lead Poisoning Prevention Program (ACLPPP) in 1993. Of these two areas, the west Berkeley area had the lowest overall lead concentrations, and was therefore used as the "background area" with which to compare soil lead data from the Verdese Carter Park area.

The west Berkeley soil lead data were collected from 63 residential yards in an area bounded by Channing, Addison, Seventh and Tenth Streets, approximately 11 miles north of Verdese

Carter Park. This area is a residential neighborhood containing homes of approximately the same age and characteristics as those in the Verdese Carter Park neighborhood.

5.1.2 General Background Comparisons

The delineation yard sample results from each of the Phase 3 properties was compared to the full set of yard sample data from the west Berkeley background area. All data used in this comparison are shown on Figure 2. Delineation yard sample data for each Phase 3 property are labeled by parcel number, and indicated by one of the thin vertical lines on the figure. Each tick mark indicates an individual sample concentration. The property described in this report is labeled as parcel number «Property_No».

The West Berkeley (ACLPPP) background data set is shown on Figure 2 as a plot of all soil sample concentrations at the right-hand margin of the figure. The horizontal lines across the figure correspond to the median (50th percentile) and 75th percentile of the background data (the median line indicates that half the background data had lead concentrations greater than, and half (50%) had lead concentrations less than, the median. The 75th percentile line indicates that 25% had concentrations greater than, and 75% had concentrations less than, the 75th percentile line. In addition, the figure shows a similar plot of soil samples from the Fruitvale District data at the left-hand margin of the figure. It should be noted that due to the large amount of data in the background data set, many tick marks represent multiple sample points.

The yard-sample lead concentrations shown for each property in Figure 2 generally show a range of concentrations. For most properties, many of the samples cluster around a relatively small range, while a few samples are either very high and/or very low relative to this range. Generally, the main cluster of samples is thought to show typical lead concentrations for the yard as a whole. Sample points that show very low concentrations relative to the main cluster are generally interpreted to indicate that concentrations of lead may have been lowered selectively in some portions of yards due to past landscaping or construction activities (e.g., excavation or grading of soils, resodding, deep rototilling). Conversely, sample points that show very high concentrations relative to the main cluster are probably due to sources of lead that actually lie on part(s) of the property (e.g. although areas close to painted structures were generally avoided during sampling. However, due to space confines, some of the yard samples were taken very close to dripline areas and may have contained soil contaminated with lead-based paint. Samples may also have been taken at locations where painted structures had previously been present but have since been removed, or where automobiles had been parked or driven). For this reason, isolated very high and very low individual points for each property are not considered indicative of the typical lead concentrations found in the yards.

Figure 2 shows that the Phase 3 lead concentration data set, as a whole, generally clusters around the median of the background data set. This observation, and detailed statistical analyses described in the SI Report (Parsons, 1998b), indicate that the delineation yard sample data for the Phase 3 properties are as a whole comparable to the data from the background area. This strongly suggests that lead concentrations at most of the Phase 3

properties are, in general, typical of lead concentrations to be expected in some other urban parts of Oakland.

5.1.3 Property-Specific Data Evaluation

As stated above, the yard data from the Phase 3 properties as a whole are not significantly different from the background data. However, some individual properties do show sample concentrations that are generally higher or lower than others.

Properties where delineation yard samples show generally higher lead concentrations than comparable samples from the modified background area could possibly have received lead associated with emissions from the former battery factory, although higher concentrations can also be the result of the natural variation present in the data. Therefore, the data from properties which had relatively higher lead concentrations (defined here as those properties where more than 50 percent of the samples exceeded the 50th percentile of the background data, or 25 percent of the samples exceeded the 75th percentile), were reviewed on a site-by-site basis to evaluate whether lead concentrations may potentially have been affected by emissions from the former battery factory. In addition, a few properties that showed unusual clusters of elevated lead concentrations were reviewed to evaluate whether they could potentially be associated with emissions from the former battery factory. In this evaluation, emphasis was placed on both the observed spatial distribution of lead at the property (Figure A-«Property_No»-1), and on whether the property is located within an area that has a high potential to have been influenced by airborne emissions from the former battery factory (based on the regional lead distributions and air modeling results described in the SI Report).

As noted above, samples collected close to painted structures (i.e. houses, garages, fences), both in the background area and in the Verdese Carter Park neighborhood, in many cases show elevated concentrations associated largely with lead contributions from current or past flaking and peeling of lead-based paint. Most of these samples were categorized as dripline samples, and so were not used in the evaluations described above. Although these samples are not directly useable for evaluating whether contributions from the former battery factory may have impacted the site, they can be useful both for determining whether patterns of lead concentrations observed in the yard samples are influenced by painted structures, and whether soil adjacent to them has been highly impacted.

The data evaluation findings specific to Property Number «Property_No» are given below.

«Summary_of_Findings»

6. Soil Cleanup (section not included for properties where soil removal is not recommended)

Cleanup work will be conducted by contractors to AlliedSignal. Cleanup methods that will be used for the proposed soil removal are described in detail in the Removal Action Workplan (Parsons 1996e), and are summarized below. Prior to conducting cleanup work, each property owner will be asked to review an information sheet pertaining to the cleanup,

to inform AlliedSignal of any relocation needs or other special needs of residents, and to sign an access agreement allowing cleanup and restoration work to proceed:

6.1 Cleanup Recommendations

«Cleanup_Recommendations»

6.2 Excavation Methods

Temporary fencing will be set up prior to excavation to exclude the public from work areas, and to delimit property owner access paths from the street to the house entrances. Signs and barriers will be placed to allow work on the road shoulders and sidewalks. Traffic control will most likely consist of closure of sidewalks, direction of a traffic lane to allow for shoulder or sidewalk work, or closure of one lane of a multi-lane street.

The remediation contractor will clear the property of shrubs, trees and any general debris not considered personal property using standard power tools.

Soil excavation will be accomplished with small-skid-steer loaders, in combination with a small-tracked excavator, and hand excavation work where necessary. Excavated material will be taken, in most cases, directly to a transport vehicle or hard-covered storage bin staged curbside or parked in the property driveway where room allows. A buffer loading zone consisting of an area of geotextile will be used to minimize the tracking or spillage of soil out at the loading area. Spills will be scooped up manually. Generally, soil will be transported directly to the disposal facility, although hard-covered debris boxes may be left overnight in some instances, either in the street, or with the owner's permission, in the property driveway.

6.3 Health and Safety

Dust control measures will consist of the application of water mists on exposed surface soils. Water will be provided either via temporary water hydrant hookups, with the use of water transport equipment, or, with the owner's permission, by using the property hose bibbs, and will be controlled so as to minimize the potential of generating puddles.

All personnel entering the established work zones will be required to comply with a Health and Safety Plan (Parsons 1996b, 1996e). A qualified individual will be designated as the site safety contact and will be available on the project at all times. Joint health and safety meetings will be held between the remediation contractor and Parsons site personnel. Air monitoring will consist of two personnel air samplers used on a periodic basis. In addition, continuous perimeter air monitoring of the work area will be conducted at upwind, downwind, and crosswind locations to assure that neighbors and residents are not exposed to unacceptable levels of dust and air-borne lead.

6.4 Confirmation Sampling

Confirmation soil samples will be collected at the base of each excavation area to verify that lead concentrations are less than 500 mg/kg. In addition, surface soil confirmation samples

will be taken at the edges of each excavation area except where either: the excavation is bounded by a wall, sidewalk, etc., or; delineation samples that contained less than 500 mg/kg lead were previously collected at the excavation edge. The excavation will be left open while confirmation samples are analyzed on 24-hour turnaround. If confirmation samples exceed 500 mg/kg lead, the excavation areas that contain lead in excess of 500 mg/kg will be deepened up to 2 feet below the original ground surface and/or widened, as appropriate, until subsequent confirmation samples contain less than 500 mg/kg lead. With the property owner's permission, soil containing up to 840 mg/kg may be left in place in excavation areas beneath mature trees, so as not to damage tree roots.

6.5 Restoration

Upon completion of soil excavation and confirmation soil sampling work, clean imported soil will be transported to the property by dump trucks, and placed in the excavation(s) with small skid-steer loaders. The fill material will be wheel-rolled to provide a minimum of compaction.

Final grading will be conducted to match grades established in the initial property survey. A final survey will be performed to determine that the required grades have been met.

Upon completion of backfilling, site structures and utilities will be replaced in accordance with the information contained on the initial property survey.

Plantings and vegetation will be replaced with healthy plantings and vegetation to match the site layout recorded in the initial property survey prior to the removal effort. Top soil and compost will be placed and rototilled as necessary prior to emplacement of plantings. Advice by a horticultural specialist will be used for initial planting and maintenance of the replacement vegetation. Any replaced concrete will be 4-inch thick, 2,500 pounds per square inch. Replacement sod will include a mixture of 50% fescue and 50% blue grass. Prior to placement of the sod, previously placed topsoil will be amended, as required, to promote sod growth.

The final grade, and the location and description of all replaced structures and replacement vegetation will be recorded on the final as-built drawings.

6.6 Reporting

After completion of soil removals and restoration, a Removal Action Completion Report will be completed for each property, and a copy will be provided to each property owner. The report will describe the extent of the soil removal, the confirmation sampling results, and will indicate whether USEPA cleanup standards were met by the soil removal. The report will be signed and stamped by a qualified environmental professional (Registered Geologist, Certified Engineering Geologist, or Professional Civil Engineer) registered in the State of California.

References

Bellot, Michael (USEPA) 1996, personal communication

Parsons, 1996a, Final Removal Site Inspection Workplan for Phase 1 and 2 RA Properties, Verdese Carter Park Project, Oakland, California, 30 April

Parsons, 1996b, Site Safety and Health Plan, Verdese Carter Park Project, Oakland, California, 8 April

Parsons, 1996c, Final Quality Assurance Project Plan, Verdese Carter Park Project, Oakland, California, 1 May

Parsons, 1996d, Removal Site Inspection Technical Memoranda for Phase 1 and 2 RA Properties, Verdese Carter Park Project, Oakland, California, 26 separate reports, various dates.

Parsons, 1996e, Final Removal Action Workplan for Phase 1 and 2 RA Properties, Verdese Carter Park Project, Oakland, California, 14 June.

Parsons, 1996f, Data Quality Assessment Report 1 for Phase 1 and 2 Properties, Verdese Carter Park Project, Oakland, California.

Parsons, 1996g, Data Quality Assessment Report 2 for Phase 1 and 2 Properties, Verdese Carter Park Project, Oakland, California.

Parsons, 1996h, Data Quality Assessment Report No. 3 for Phase 1 and 2 Properties, Verdese Carter Park Project, Oakland, California.

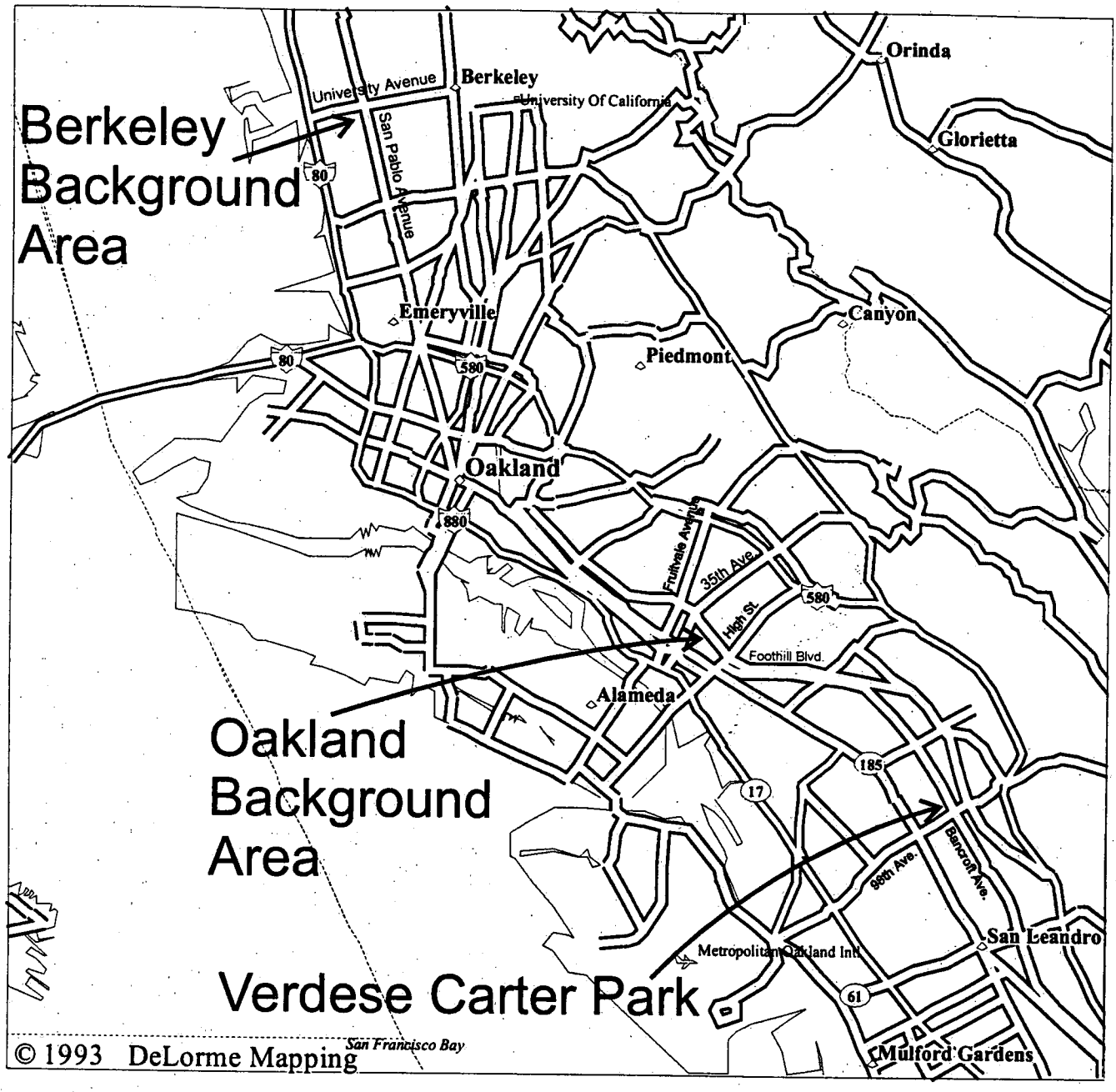
Parsons, 1997, Final Site Inspection Workplan for Verdese Carter Park Project, Oakland, California, 3 March.

Parsons, 1998a, Data Quality Assessment Report No. 4, Site Inspection, Verdese Carter Park Project, Oakland, California, April 2.

Parsons 1998b, Draft Final Site Inspection Report, Verdese Carter Park Project, Oakland, California, September 1.

Parsons, 2000, Site Inspection Report Addendum for Phase 3 Properties, Verdese Carter Park Project, Oakland, California, September 19.

Figure 1

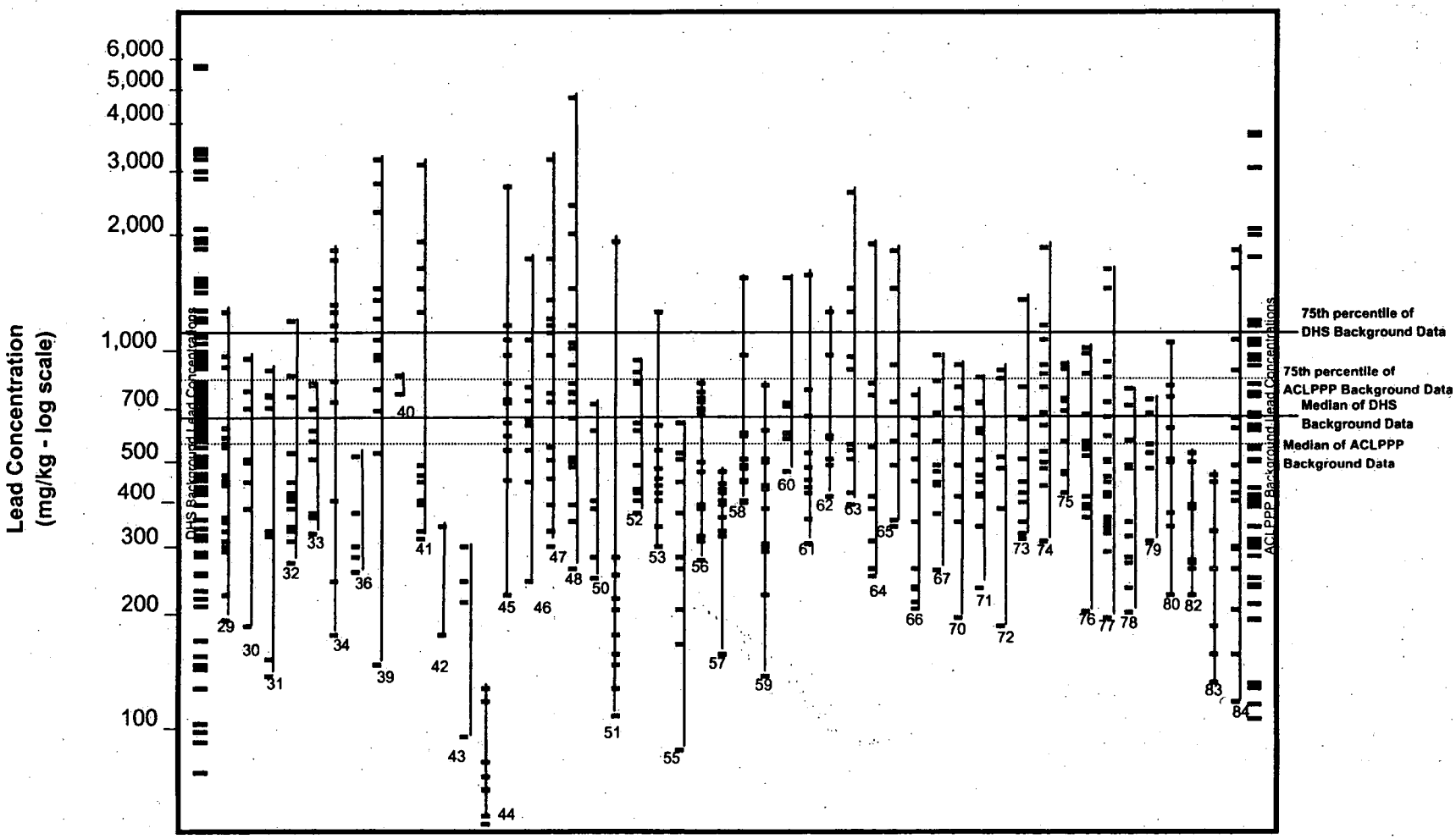


Verdese Carter Park Project
Allied Signal, Inc.

Background Area Locations

PARSONS ENGINEERING SCIENCE, INC

Figure 2
Verdese Carter Park Project
Surface Soil Lead Concentrations
from Phase 3 Residential Properties and from Filtered DHS and ACLPPP Background Data



Vertical lines represent the range of concentrations for individual residential properties; tick marks indicate individual sample concentrations. Property parcel numbers are shown below the vertical lines.

The 75th percentile and the median (50th percentile) of the two background data sets are indicated by horizontal lines on the graph. Seventy-five percent of the background lead sample concentrations are less than the 75th percentile; 50 percent are less than the 50th percentile; etc.

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ATTACHMENT B

TECHNICAL MEMORANDA
PROPERTY-SPECIFIC DATA TABLES

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
	29	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. However, the accuracy of the lead concentration in sample D-029-12 is considered as estimated and flagged "J" because a laboratory QC sample was outside specified control limits. The accuracy of the lead concentration from all samples from this property (samples D-029-1 thru D-029-17) is considered as estimated and flagged "J" because a laboratory QC sample was outside specified control limits. The allowable difference between the actual sample result and the QC sample result is 10% or less; the	The lead concentrations measured at Property Number 29 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 29 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Lead concentrations in dripline samples were not significantly different than nearby yard samples. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		measured value was 26%. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	property. Therefore, no further action is recommended.	
	30	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	The lead concentrations measured at Property Number 30 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 30 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			work. Lead concentrations in dripline samples were not significantly different than nearby yard samples. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
	31	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	The lead concentrations measured at Property Number 31 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples than expected exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 31 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Except for a single sample, lead concentrations in dripline samples were not significantly different from nearby yard samples. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			factory were observed at this property. Therefore, no further action is recommended.	
	32	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. However, the accuracy of the lead concentration in an equipment rinseate blank is considered as	The lead concentrations measured at Property Number 32 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		estimated and flagged "UJ" because the rinsate sample was kept at 19°C, which was above the specified ambient cooler temperature of 8°C. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	32 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Lead concentrations in dripline samples were not significantly different than nearby yard samples. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	33	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. However, the accuracy of the lead concentration in	The lead concentrations measured at Property Number 33 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, only 6 out of 10 yard samples exceed the 50th percentile, and no samples exceed the 75th percentile, of the	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		sample D-033-11 is considered as estimated and flagged "J" because a laboratory QC sample was outside specified control limits. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	background data set. In comparison, for an exact match to the background percentiles, 5 out of 10 yard samples would exceed the 50th percentile, and 2.5 out of 10 yard samples would exceed the 75th percentile, of the background data set. No spatial trends are observed in the yard sample results that would link high lead concentrations with the former battery factory or indicate that the yard samples are unrepresentative. In addition, based on project-wide soil sampling data, the property does not lie within a part of the neighborhood that has been identified as having a high potential to have been influenced by airborne emissions. Therefore, lead concentrations at Property Number 33 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work.	

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			Lead concentrations in several dripline samples were generally higher than nearby yard samples, as is typical of older homes. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	34	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. However, the accuracy of the lead concentrations in samples D-034-06 and -07 are considered as estimated because sample duplicates were outside specified control limits. In accordance with the Site	The lead concentrations measured at Property Number 34 are not statistically greater than the lead concentrations measured in the final background area. The final background area consists of residential yards in a nearby neighborhood of Oakland that is outside of the area of influence of the former battery factory. However, a greater than expected number of the yard samples exceed the 75th percentile of the background data set. Further inspection of the sample	It is recommended that all exposed soil at the property be removed, as shown in Figure A-034-2.

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	concentration map (Figure A-034-1) reveals that the range of lead concentration values for yard samples at Property Number 34 is relatively wide and the spatial distribution of lead is highly heterogeneous, suggesting the presence of local hot spot sources on the property. Airborne emissions fallout associated with the former battery factory would be expected to produce a more uniform distribution across the yard. Furthermore, yard areas are very narrow at this property (i.e. there were almost no open yard areas available for sampling) and much of the yard is paved. Yard samples were collected either immediately adjacent to the dripline areas (defined as 5 feet from residential structures) or in areas adjacent to paved surfaces where runoff would have collected and infiltrated. Only two samples were collected in open areas of the yard away from either buildings or	

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			fencelines and these both had concentrations of lead less than 200 mg/kg. Similarly, lead concentrations in large open areas of adjacent properties (i.e. Property Number 59) are also low. This property is not in the area of highest potential for airborne lead deposition based on regional lead distribution or air dispersion modeling results (Parsons 1998). For these reasons, Property Number 34 does not appear to have been influenced by emissions from the former battery factory. Notwithstanding the above, EPA has requested that soil removal work be conducted at Property Number 34 because lead levels were higher at this property than at many other homes in the neighborhood.	
	36	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy	The lead concentrations measured at Property Number 36 are no greater than the lead concentrations measured in the	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 36 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Lead concentrations in dripline samples were generally higher than nearby yard samples, as is typical of older homes. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	39	In accordance with the Quality Assurance Project	The lead concentrations measured at Property Number 39 is	It is recommended that all exposed soil at the property be removed, as shown in

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. However, the accuracy of the lead concentration in sample D-039-16 is considered as estimated and flagged "J" because a laboratory QC sample was outside specified control limits. The accuracy of the lead concentration from all samples from this property is considered as estimated and flagged "J" because a laboratory QC sample was outside specified control limits. The allowable difference between the actual sample result and the QC sample result is 10% or less; the measured value was 41.5%. In accordance with the Site Inspection (SI) Workplan	statistically greater than the lead concentration for residential yards in a nearby neighborhood of Oakland that is outside of the area of influence of the former battery factory. A greater than expected number of the yard samples exceed the 75th percentile of the background data set. This property is located immediately west of several Phase 1 and 2 properties that had high levels of lead in soil samples, and were situated across the street from the former battery factory. However, it is also located immediately southeast of properties (e.g. Property Numbers 57 and 58), which have levels of lead in soil that are consistent with background concentrations. It was noted during visits to the property that a number of historical former farm buildings in relatively poor condition are located in the back yard, and therefore could have been a significant contributor of	Figure A-039-2.

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	lead-based paint contamination to soil. Therefore, it is not possible to evaluate whether the high lead concentrations at this property are associated with emissions from the former battery factory, or are derived from sources on the property.	
	40	**No Quality Summary because no samples collected. The following text was inserted in lieu of the quality summary:** **2.1.2 SI Samples** Staff from Parsons Engineering Science and USEPA visited parcel 40 on July 30, 1999 with the intention of collecting SI samples. However, all areas of the yard were found to be paved except for a small (approximately 10 foot by 2 foot) planter	Due to the limited area in which samples could be collected, only two sample results are available for this property. This is an insufficient number of samples to conduct statistical comparisons to background. However, both of these sample results exceed the median concentrations of samples collected in the background area. In addition, the property lies between several Phase 1 and 3 properties that had high levels of lead in soil samples. It should be noted that due to the very small yard area of this property, most of the property lies within or close to dripline areas of painted structures. Therefore, it is not	It is recommended that all exposed soil at the property, consisting of a single planter area along the western property boundary, be removed.

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		area along the western property boundary. This area was previously sampled by USEPA staff in March, 1995. Due to the small size of the planter area, and the fact that two samples had previously been collected there, no SI samples were collected.	possible to determine whether elevated soil lead concentrations are due to emissions from the former battery factory, or are due to weathering of paint.	
	41	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. However, the accuracy of the lead concentration in sample D-041-04 is considered as estimated and flagged "J" because a laboratory QC sample was outside specified control limits. The accuracy of the lead concentration from all	The lead concentrations measured at Property Number 41 are not statistically greater than the lead concentrations measured in the final background area. As discussed above, the final background area consists of residential yards in a nearby neighborhood of Oakland that is outside of the area of influence of the former battery factory. However, a greater than expected number of the yard samples exceed the 75th percentile of the background data set. Further inspection of the data reveals that	It is recommended that all exposed soil in the front yard of the property be removed, as shown in Figure A-041-2. Soil concentrations in the backyard are relatively low, and therefore meet EPA cleanup standards.

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		samples from this property is considered as estimated and flagged "J" because a laboratory QC sample was outside specified control limits. The allowable difference between the actual sample result and the QC sample result is 10% or less; the measured value was 29.5%. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	samples with concentrations above the 75th percentile of the background data are clustered in the front yard along 98th Avenue (Figure A-041-1). Lead concentrations on this property may have been influenced by its proximity to 98th Avenue, which is a major traffic corridor, and therefore was a major source of lead associated with past automobile emissions. However, this property also lies within the area that had a high potential for airborne lead deposition associated with the former battery factory, based on air dispersion modeling and regional lead distributions (Parsons, 1998). Therefore, it is not possible to evaluate whether the high lead concentrations at this property are associated with emissions from the former battery factory, or are derived primarily from automobile emissions.	
	42	In accordance with the Quality Assurance Project	The lead concentrations measured at Property Number 42 are no	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. However, the accuracy of the lead concentration in all the samples at this property must be considered as estimated and flagged "J" because a laboratory QC sample was outside specified control limits. The allowable difference between serial dilution and the actual sample result is 10% or less; the measured value was 13.7%. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	greater than the lead concentrations measured in the west Berkeley background area. In particular, none of the yard samples exceed the 50th or 75th percentiles of the background data set. Therefore, lead concentrations at Property Number 42 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and the property is not recommended for soil removal work. Lead concentrations in dripline samples were not significantly different than nearby yard samples. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
	43	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	The lead concentrations measured at Property Number 43 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, none of the yard samples exceed the 50th percentile or the 75th percentile of the background data setTherefore, lead concentrations at Property Number 43 were interpreted to be less than the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Lead concentrations in dripline samples were not significantly different than nearby yard samples. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			recommended.	
	44	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	The lead concentrations measured at Property Number 44 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, none of the yard samples exceed the 50th or 75th percentiles of the background data set. Therefore, lead concentrations at Property Number 44 were interpreted to be less than the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Lead concentrations in dripline samples were not significantly different than nearby yard samples. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			property. Therefore, no further action is recommended.	
	45	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. However, the accuracy of the lead concentration in sample D-045-02 is considered as estimated and flagged "J" because a laboratory QC sample was outside specified control limits. The accuracy of the lead concentration from all samples from this property is considered as estimated and flagged "J" because a laboratory QC sample was outside specified control limits. The allowable difference between the actual sample result and the QC sample result is	The lead concentrations measured at Property Number 45 are not statistically greater than the lead concentrations measured in the final background area. As discussed above, the final background area consists of residential yards in a nearby neighborhood of Oakland that is outside of the area of influence of the former battery factory. However, a greater than expected number of yard samples exceed the 50th percentile of the background data set. However, further inspection of the data for this property reveals that samples with high lead concentrations are clustered largely along the southwestern part of the property (Figure A-045-1) which is adjacent to another property with elevated lead concentrations (Property Number 41). Lead concentrations on both of these	It is recommended that all exposed soil at the property be removed, as shown in Figure A-045-2

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		10% or less; the measured value was 11.3%. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	properties may have been influenced by their proximity to 98th Avenue, which is a major traffic corridor, and therefore was a major source of lead associated with past automobile emissions. In addition, a number of the samples with high lead concentrations lie adjacent to either fencelines, buildings on adjacent properties, or to a detached garage whose painted surfaces showed large amounts of peeling and flaking. However, this property also lies within the area that had a high potential for airborne lead deposition associated with the former battery factory, based on air dispersion modeling and regional lead distributions (Parsons, 1998). Therefore, it is not possible to evaluate whether the high lead concentrations at this property are associated with emissions from the former battery factory, or are derived primarily from automobile emissions.	

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
	46	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	The lead concentrations measured at Property Number 46 are not statistically greater than the lead concentrations measured in the final background area. The final background area consists of residential yards in a nearby neighborhood of Oakland that is outside of the area of influence of the former battery factory. Inspection of the sample concentration map for Property Number 46 (Figure A-046-1) reveals that the sample above the 75th percentile of the background data is located between the building, sidewalks, and driveway. The highest concentrations of lead are near 98th Avenue and Elmar Street, painted structures, and/or paved areas where runoff may collect and infiltrate, suggesting that the high concentrations may have resulted from paint sources or vehicle emissions. Nevertheless, the parcel is within the area of high potential for the	It is recommended that all exposed soil along the narrow strip between the building and the sidewalk along 98th Avenue and all exposed soil in the curb strip adjacent to Elmar Street be removed, as shown in Figure A-046-2. Soil concentrations in the sideyard are relatively low, and therefore meet EPA cleanup standards.

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			deposition of lead from the former battery factory. In addition, it lies near another Phase 3 parcel (Parcel 45) that had high lead concentrations prior to soil removal work. Therefore soil removal is recommended at this property.	
	47	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	The lead concentrations measured at Property Number 47 are not statistically greater than the lead concentrations measured in the final background area. As discussed above, the final background area consists of residential yards in a nearby neighborhood of Oakland that is outside of the area of influence of the former battery factory. However a greater than expected number of the yard samples exceed the 75th percentile of the background data set. Inspection of the sample concentration map (Figure A-047-1) reveals that samples above the 75th percentile of the background data are	It is recommended that all exposed soil at the property be removed, as shown in Figure A-047-2.

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			scattered throughout the property and interspersed with samples at relatively low concentrations, although samples along the northwestern part of the property are uniformly low compared to those to the southeast. Property Number 47 is contiguous with a Phase 2 property (Parcel 13) that is across 96th Avenue from the former battery factory and had relatively high soil lead concentrations prior to soil removal work.	
	48	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. However, the accuracy of the lead concentration in samples D-048-01 thru D-048-18 must be considered as estimated and flagged "J" because a laboratory	The lead concentrations measured at Property Number 48 are not statistically greater than the lead concentrations measured in the final background area. As discussed above, the final background area consists of residential yards in a nearby neighborhood of Oakland that is outside of the area of influence of the former battery factory. A greater than expected number of yard samples exceeds the 75th	It is recommended that all exposed soil at the property be removed, as shown in Figure A-048-2.

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		QC sample was outside specified control limits. The allowable difference between the actual sample result and the QC sample result is 10% or less; the measured value was 16%. The rinsate sample, E-004-04 , must be considered as estimated and flagged "UJ" because the rinsate sample was kept above the ambient cooler temperature of 8°C, at 11°C. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	percentile of the background data set. An inspection of the sample concentration map for Parcel 48 (Figure A-048-1) reveals that lead concentrations above the 75th percentile are clustered in the back and side yard areas along the western portion of the property and along the 96th Avenue curbstrip. This property is contiguous with a Phase 2 property (Property Number 13) that is across 96th Avenue from the former battery factory and that had relatively high soil lead concentrations prior to soil removal work.	
	50	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy	The lead concentrations measured at Property Number 50 are no greater than the lead concentrations measured in the	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 50 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Lead concentrations in dripline samples were not significantly different than nearby yard samples. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	51	In accordance with the Quality Assurance Project	The lead concentrations measured at Property Number 51 are no	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 51 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. A single sample and duplicate with elevated concentrations of lead (Figure A-051-1) was located close to the driveway area, and so is suspected to have been impacted by automobile emissions or automobile repair work. Lead concentrations in dripline samples were not significantly different than nearby yard samples.	

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	52	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	The lead concentrations measured at Property Number 52 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 52 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Lead concentrations in dripline samples were not significantly	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			different than nearby yard samples. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	53	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	The lead concentrations measured at Property Number 53 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 53 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work.	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			Lead concentrations in dripline samples were not significantly different than nearby yard samples. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	55	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness	The lead concentrations measured at Property Number 55 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 55 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		criteria.	not recommended for soil removal work. Lead concentrations in several dripline samples were slightly elevated relative to nearby yard samples, which is typical for older homes. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	56	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. However, the accuracy of the lead concentration in sample D-056-12 is considered as estimated and flagged "J" because a	The lead concentrations measured at Property Number 56 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 56 were interpreted to be within	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		laboratory QC sample was outside specified control limits. The accuracy of the lead concentration from sample D-056-12 is considered as estimated and flagged "J" because a laboratory QC sample associated with that field sample was outside specified control limits. The allowable difference between the actual sample result and the QC sample result is 10% or less; the measured value was 10.6%. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. The lead concentration in a single dripline sample was slightly elevated relative to nearby yard samples. Elevated dripline sample concentrations are typical for older homes. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	57	In accordance with the Quality Assurance Project	The lead concentrations measured at Property Number 57 are no	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	greater than the lead concentrations measured in the west Berkeley background area. In particular, none of the yard samples exceed the 50th or 75th percentiles of the background data set. Therefore, lead concentrations at Property Number 57 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Lead concentrations in dripline samples were not significantly different than nearby yard samples. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	58	In accordance with the	The lead concentrations measured	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	at Property Number 58 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 58 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Lead concentrations in dripline samples were not significantly different than nearby yard samples. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further	

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			action is recommended.	
	59	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. However, the accuracy of the lead concentration in sample D-059-04 is considered as estimated and flagged "J" because a laboratory QC sample was outside specified control limits. The accuracy of the lead concentration from all samples from this property is considered as estimated and flagged "J" because a laboratory QC sample was outside specified control limits. The allowable difference between the actual sample result and the QC sample result is 10% or less; the measured	The lead concentrations measured at Property Number 59 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 59 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Lead concentrations in dripline samples were not significantly different than nearby yard samples. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		value was 19.8%. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	factory were observed at this property. Therefore, no further action is recommended.	
	60	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	The lead concentrations measured at Property Number 60 are not statistically greater than the lead concentrations measured in the Oakland background area. The Oakland background area consists of residential yards in a nearby neighborhood of Oakland that is outside of the area of influence of the former battery factory. In particular, fewer yard samples than expected exceed the 50th and 75th percentiles of the Oakland background data set. However, an additional background comparison was made using lead concentration data from an alternate background	It is recommended that all exposed soil at the property be removed, as shown in Figure A-060-2.

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			area located in west Berkeley. A greater than expected number of samples exceed the 50th percentile of the west Berkeley background data set. Based on these comparisons, lead concentrations at Property Number 60 were interpreted to be within the typical range of Oakland background concentrations with a high degree of confidence, but slightly exceeded the typical range of West Berkeley background concentrations. Property Number 60 lies adjacent to a group of homes that is one of the soil lead "hot spots" in the Verdese Carter Park area. Many of the immediately surrounding properties have been, or are recommended for, remediation. This property is recommended for soil removal work because lead concentrations may slightly exceed background data, and because the property lies within an	

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			area with a high potential to have been influenced by emissions from the former battery factory.	
	61	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	The lead concentrations measured at Property Number 61 are not statistically greater than the lead concentrations measured in the final background area. The final background area consists of residential yards in a nearby neighborhood of Oakland that is outside of the area of influence of the former battery factory. However, the property owner claims to have moved and mixed significant quantities of soil. To ensure that the dataset accurately reflects the lead levels at the property, additional statistically random samples were taken along with directed samples with locations determined by USEPA. Inspection of the sample concentration map for Property Number 61 (Figure A-061-1) reveals that the sample above the 75th percentile of the background	It is recommended that all exposed soil in curb strip along Springfield Street and a portion of the northern section of the back yard be removed, as shown in Figure A-061-2. Soil concentrations in the frontyard and in the southern section of the backyard are relatively low, and therefore meet EPA cleanup standards.

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			data is located in the curb strip along Springfield Street. The highest concentrations of lead are near Springfield Street, painted structures, and/or paved areas where runoff may collect and infiltrate, suggesting that the high concentrations may have resulted from paint sources or vehicle emissions. Nevertheless, the parcel is within the area of high potential for the deposition of lead from the former battery factory. In addition, it lies between two Phase 3 parcels (Parcel 60 and 63) and across Springfield Street from one Phase 2 parcels (Parcel 22) that had high lead concentrations prior to soil removal work. Therefore soil removal is recommended at this property.	
	62	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this	The lead concentrations measured at Property Number 62 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, there is a relatively	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	close correspondence between the 50th and 75th percentiles of the yard samples and the 50th and 75th percentiles of the background data set, in that 4 out of 7 yard samples exceeded the 50th percentile, and 2 out of 7 yard samples exceeded the 75th percentile, of the background data. In comparison, for an exact match to the background percentiles, 3.5 out of 7 yard samples would exceed the 50th percentile, and 1.75 out of 7 yard samples would exceed the 75th percentile, of the background data set. In addition, the sample with the highest lead concentration (1300 ppm) at the property (Figure A-062-1) was located immediately adjacent to the driplines of two painted outbuildings, and so could have been impacted by lead-based paint from those buildings. Therefore, lead concentrations at Property Number 62 were interpreted to be within the typical range of background	

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Lead concentrations in dripline samples were not significantly different than nearby yard samples. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	63	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this	The lead concentrations measured at Property Number 63 are not statistically greater than the lead concentrations measured in the final background area. As discussed above, the final background area consists of residential yards in a nearby neighborhood of Oakland that is outside of the area of influence of the former battery factory.	It is recommended that all exposed soil at the property be removed, as shown in Figure A-063-2.

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		property are judged to be representative and comparable, and have met the project completeness criteria.	However, more of the yard samples than expected exceed the 75th percentile of the background data set. Inspection of the sample concentration map for Property Number 63 (Figure A-063-1) reveals that samples above the 75th percentile of the background data are scattered throughout the property. The highest concentrations of lead are near Springfield Street, painted structures, and/or paved areas where runoff may collect and infiltrate, suggesting that the high concentrations may have resulted from paint sources or vehicle emissions. Nevertheless, the parcel is within the area of high potential for the deposition of lead from the former battery factory. In addition, it lies across Springfield Street from two Phase 2 parcels (Parcels 21 and 22) that had high lead concentrations prior to soil removal work. Therefore soil removal is recommended at this	

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			property.	
	64	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	The lead concentrations measured at Property Number 64 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 64 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and therefore this property is not recommended for soil removal work. Lead concentrations in dripline samples were generally slightly higher than nearby yard samples, as is typical of older homes. On the basis of the findings described above, no discernible impacts associated with lead	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	65	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	The lead concentrations measured at Property Number 65 are no greater than the lead concentrations measured in the west Berkeley background area.In particular, the 50th and 75th percentiles of the yard samples are close to the 50th and 75th percentiles of the background data set, in that 5 of 8 yard samples exceeded the 50th percentile, and 3 of 8 yard samples exceeded the 75th percentile, of the background area. In comparison, for an exact match to the background percentiles, 4 out of 8 yard samples would exceed the 50th percentile, and 2 out of 8 yard samples would exceed the 75th percentile, of the background data set. In addition, samples located adjacent to the driveway (Figure A-065-1) were found to have	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			elevated lead concentrations compared to other areas of the property, and so are suspected to have been impacted by automobile emissions or automobile repair work. In contrast, samples collected from open yard areas of the property, which were less likely to be impacted by automobile sources or lead-paint derived from buildings, had relatively consistent, substantially lower lead concentrations. Apart from the high lead concentrations observed near the driveway and in dripline samples, no spatial trends were observed in the sample data that might link observed high lead concentrations with the former battery factory, or indicate that yard samples were unrepresentative. Therefore, lead concentrations at Property Number 65 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is	

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			not recommended for soil removal work. Lead concentrations in dripline samples were generally higher than nearby yard samples, as is typical of older homes. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	66	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. However, the accuracy of the lead concentration in sample E-066-01 is considered as estimated and flagged "UJ" because the equipment rinsate	The lead concentrations measured at Property Number 66 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 66 were interpreted to be within the typical range of background	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		sample was kept at 19°C, which was above the specified ambient cooler temperature of 8°C,. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Lead concentrations in dripline samples were generally higher than nearby yard samples, as is typical of older homes. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	67	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this	The lead concentrations measured at Property Number 67 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		property are judged to be representative and comparable, and have met the project completeness criteria.	67 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. The highest lead concentrations were found in several undesignated samples collected by EPA. These samples were apparently located between the house and an outbuilding (Figure A-067-1), and so were likely influenced by lead-based paint derived from those buildings. Higher lead levels in samples close to buildings are typical for older homes. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	70	In accordance with the	The lead concentrations measured	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	at Property Number 70 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 70 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Lead concentrations in dripline samples were not significantly different than nearby yard samples. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further	

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			action is recommended.	
	71	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	The lead concentrations measured at Property Number 71 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 71 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Lead concentrations in dripline samples were not significantly different than nearby yard samples. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			factory were observed at this property. Therefore, no further action is recommended.	
	72	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	The lead concentrations measured at Property Number 72 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and close to 25% of the yard samples exceed the 75th percentile of the background data set. Therefore, lead concentrations at Property Number 72 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Lead concentrations in dripline samples were not significantly different than nearby yard samples.	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	73	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	The lead concentrations measured at Property Number 73 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 73 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Lead concentrations in dripline samples were generally higher	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			than nearby yard samples, as is typical of older homes. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	74	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	The lead concentrations measured at Property Number 74 are not statistically greater than the lead concentrations measured in the final background area. The final background area consists of residential yards in a nearby neighborhood of Oakland that is outside of the area of influence of the former battery factory. The expected number of yard samples exceeded the 50th percentile, and fewer than the expected number exceeded the 75th percentile of the background data set. Yard areas are very narrow at this property (i.e. there were almost no open	Due to the uncertainty described above in interpreting the sampling results, it is recommended that all exposed soil at the property be removed, with the exception of soil located in the northwest portion of the property, which has lead levels that are already less than the cleanup standard of 500 mg/kg. The proposed area of soil removal is shown in Figure A-074-2,

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			yard areas available for sampling) and much of the yard is paved (Figure A-074-1). Inspection of the sample concentration map for this property reveals that samples greater than the 75th percentile were collected either immediately adjacent to the dripline areas (defined as 5 feet from residential structures) or in areas adjacent to paved areas, including driveways, where runoff would have collected and infiltrated. Therefore, lead concentrations at Property Number 74 were interpreted to be within the typical range of background levels. Notwithstanding the above, the property lies adjacent to a group of homes that is one of the soil lead "hot spots" in the Verdese Carter Park area and it is in close proximity to the former battery factory location. The property also shows several samples with lead concentrations greater than 1,000 mg/kg located on the eastern	

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			half of the property. That portion of the property is located closest to the former battery factory. For these reasons there is some uncertainty as to whether the detected lead is derived entirely from "background" sources such as paint and automobile emissions, or whether a portion of the lead may have been derived from the former battery factory.	
	75	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness	The lead concentrations measured at Property Number 75 are not statistically greater than the lead concentrations measured in the final background area. The final background area consists of residential yards in a nearby neighborhood of Oakland that is outside of the area of influence of the former battery factory. With the exclusion of a single elevated concentration sample collected in the curbstrip area, the expected number of yard samples exceeded the 50th percentile, and fewer than the expected number exceeded the	It is recommended that all exposed soil at the property be removed, as shown in Figure A-075-2.

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		criteria.	75th percentile of the background data set. The curbstrip sample contained 2,978 mg/kg lead, substantially higher than all other samples at the property. It was therefore excluded from the statistical evaluation because it was presumed to have been impacted by a property-specific point source of lead (for example, auto emissions, or curbside auto maintenance activities) and therefore, not be representative of yard concentrations. Therefore, lead concentrations at Property Number 75 were interpreted to be within the typical range of background concentrations. Notwithstanding the above discussion, the property lies adjacent to a group of homes that is one of the soil lead "hot spots" in the Verdese Carter Park area, is located between two properties which were subject to the Phase 2 soil removal located on the eastern half of the property closest to the	

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			former battery factory. There is some uncertainty that the detected lead is derived almost entirely from "background" sources such as paint and automobile emissions, and it is possible that a portion of the lead may have been derived from the former battery factory. Because of the uncertainties involved in interpreting the sampling results, this property is recommended for soil removal work.	
	76	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and	The lead concentrations measured at Property Number 76 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, there is a relatively close correspondence between the 50th and 75th percentiles of the yard samples and the 50th and 75th percentiles of the background data set, in that 7 of 13 yard samples exceeded the 50th percentile, and 3 of 13 yard samples exceeded the	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		comparable, and have met the project completeness criteria.	75th percentile, of the background area. In comparison, for an exact match to the background percentiles, 6.5 out of 13 yard samples would exceed the 50th percentile, and 3.25 out of 13 yard samples would exceed the 75th percentile, of the background data set. In addition, two samples were located within the curbstrip area (Figure A-076-1), and had elevated lead concentrations compared to other yard areas of the property. Curb strip sample concentrations are typically elevated throughout the project area. This finding is suspected to be due to the proximity to automobile emissions, and may result in curb strip samples being unrepresentative of yard area lead concentrations. Therefore, the yard sample data set may be biased towards overly high concentrations by the inclusion of these samples. In contrast, most samples collected from open yard	

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			areas of the property, which were less likely to be impacted by automobile sources or lead-paint derived from buildings, had relatively consistent, lower lead concentrations than the curb strip samples. Apart from the high lead concentrations observed along the curb strip, no spatial trends were observed in the sample data that might link observed high lead concentrations with the former battery factory, or indicate that yard samples were unrepresentative. Therefore, lead concentrations at Property Number 76 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. The lead concentrations in one dripline sample was higher than nearby yard samples, as is typical of older homes. Curbstrip samples also showed elevated lead	

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			concentrations, and so are suspected to have been impacted by automobile emissions or automobile repair work. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	77	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. However, the accuracy of the lead concentration in sample D-077-09 is considered as estimated and flagged "J" because a laboratory QC sample was outside specified control limits. The allowable	The lead concentrations measured at Property Number 77 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 77 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		difference between the actual sample result and the QC sample result is 10% or less; the measured value was 11.1%. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	not recommended for soil removal work. The lead concentration in one dripline sample was slightly higher than nearby yard samples, as is typical of older homes. Samples collected in the curbstrip and driveway strip showed an elevated lead concentrations, and so are suspected to have been impacted by automobile emissions or automobile repair work. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	78	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole.	The lead concentrations measured at Property Number 78 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		However, the accuracy of the lead concentration in the rinsate sample E-004-22 must be considered as estimated and flagged "UJ" because the sample was kept above the ambient cooler temperature of 8°C, at 12°C. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 78 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and therefore this property is not recommended for soil removal work. The lead concentration in one dripline sample was greater than nearby yard samples. Elevated concentrations of lead are typically found around older homes. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	79	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy	The lead concentrations measured at Property Number 79 are no greater than the lead concentrations measured in the	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	west Berkeley background area. In particular, 4 out of 6 yard samples exceed the 50th percentile, and no samples exceed the 75th percentile of the background data set. In comparison, for an exact match to the background percentiles, 3 out of 6 yard samples would exceed the 50th percentile, and 1.5 out of 6 yard samples would exceed the 75th percentile, of the background data set. In addition, based on project-wide soil sampling data, the property does not lie within a part of the neighborhood that has been identified as having a high potential to have been influenced by airborne emissions, and yard samples located at all adjacent properties had relatively low lead concentrations. No spatial trends were observed in the sample data that might link observed high lead concentrations with the former battery factory, or indicate that yard samples were	

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			unrepresentative. Therefore, lead concentrations at Property Number 79 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Lead concentrations in dripline samples were generally slightly higher than nearby yard samples, as is typical of older homes. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	80	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole.	The lead concentrations measured at Property Number 80 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		However, the accuracy of the lead concentration in sample D-080-08 is considered as estimated and flagged "J" because a laboratory QC sample was outside specified control limits. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 80 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and therefore this property is not recommended for soil removal work. Lead concentrations in dripline samples were generally higher than nearby yard samples, as is typical of older homes. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	82	In accordance with the Quality Assurance Project Plan (QAPP), overall precision and accuracy	The lead concentrations measured at Property Number 82 are no greater than the lead concentrations measured in the	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 82 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Lead concentrations in dripline samples were not significantly different than nearby yard samples. On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	
	83	In accordance with the Quality Assurance Project	The lead concentrations measured at Property Number 83 are no	None

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
		Quality Assurance Project Plan (QAPP), overall precision and accuracy were acceptable for the data associated with this property as a whole. In accordance with the Site Inspection (SI) Workplan and the QAPP, the analytical data for this property are judged to be representative and comparable, and have met the project completeness criteria.	at Property Number 36 are no greater than the lead concentrations measured in the west Berkeley background area. In particular, fewer than 50% of the yard samples exceed the 50th percentile of the background data set, and fewer than 25% exceed the 75th percentile. Therefore, lead concentrations at Property Number 84 were interpreted to be within the typical range of background concentrations with a high degree of confidence, and this property is not recommended for soil removal work. Lead concentrations in dripline samples were generally higher than nearby yard samples, as is typical of older homes. In addition, samples along the driveway had relatively elevated concentrations, and are suspected to have been impacted by automobile emissions or automobile repair work	

Address	Property No.	Quality Summary	Summary of Findings	Cleanup Recommendations
			On the basis of the findings described above, no discernible impacts associated with lead emissions from the former battery factory were observed at this property. Therefore, no further action is recommended.	

ATTACHMENT C

DATA QUALITY ASSESSMENT REPORT FOR PHASE 3 PROPERTIES

DATA QUALITY ASSESSMENT REPORT NO. 5

for

VERDESE CARTER PARK PROJECT
Oakland, California

Prepared for

AlliedSignal, Inc.

January 12, 2000

Prepared by

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DATA QUALITY ASSESSMENT REPORT NO. 5

VERDESE CARTER PARK PROJECT
Oakland, California

Prepared for

AlliedSignal, Inc.

12 January 2000

Approved by:

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ABBREVIATIONS

AlliedSignal	AlliedSignal, Inc.
ERA	Environmental Resource Associates
CCV	Continuing Calibration Verification
CFR	Code of Federal Regulations
HNO_3	Nitric Acid
ICP	Inductively Coupled Plasma
ICV	Initial Calibration Verification
LCS	Laboratory Control Sample
MDL	Method Detection Limit
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MS/MSD	Matrix Spike and Matrix Spike Duplicate
NA	Not Applicable
%R	Percent Recovery
Parsons	Parsons Engineering Science, Inc.
PE	Performance Evaluation
PDS	Post Digestion Spike
QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control
RA	Removal Action
RL	Reporting Limit
RPD	Relative Percent Difference
RSI	Removal Site Inspection
SD	Serial Dilution
SI	Site Inspection
USEPA	United States Environmental Protection Agency

SECTION 1

INTRODUCTION

This Data Quality Assessment Report No. 5 describes data validation findings for supplementary samples collected from residential properties for the Phase 3 Site Inspection (SI) near the Verdese Carter Park Site in Oakland, California. This work has been conducted by Parsons Engineering Science, Inc. (Parsons) for AlliedSignal, Inc., under the oversight of the U.S. Environmental Protection Agency (USEPA). The supplementary SI sampling involved collection of surface soil samples from 4 residential properties, and analysis of those samples for lead. The 4 properties are supplemental to the original Phase 3 SI, which was conducted between April and December 1997 (Parsons, 1998b). The first two Data Quality Assessment Reports (Parsons 1996a, Parsons 1997a) pertained to samples collected during the Phase 1 and 2 Removal Site Investigation (RSI) from 26 properties. The third Data Quality Assessment Report (Parsons 1997b) pertained to samples collected during the Removal Action (RA) from 23 Phase 1 and 2 properties. The fourth Data Quality Assessment Report pertained to the original set of samples collected during the Phase 3 Site Investigation (SI) from 43 properties (Parsons 1998a).

Soil sampling for the SI was conducted by Parsons following the procedures described in the Site Inspection Workplan (Parsons 1996b). The results of the SI are described in the Draft Final Site Inspection Report (Parsons 1998b), and the Site Inspection Report Addendum (Parsons 2000a).

A total of 50 delineation soil samples, including field duplicates, were collected from four properties during the supplemental SI sampling phase. Samples were collected between 30 July and 24 September 1999. All samples were analyzed for lead by USEPA Method 6010. Analyses were performed by the Hayward, California laboratory of Forensic Analytical, Inc.

As described in the Quality Assurance Project Plan (QAPjP) (Parsons 1996c) data validation was performed on all samples based on a review of summary Quality Control (QC) reporting data for the following QC samples:

Laboratory QC Samples

- sample holding time
- method and calibration blank contamination
- initial and continuing calibration criteria (ICV/CCV)
- matrix spike/matrix spike duplicates (MS/MSD)
- laboratory sample duplicates

- serial dilutions (SD)
- post digestion spikes (PDS)
- laboratory control samples (LCS)

Field QC Samples

- 2 equipment rinsate blanks
- 5 field duplicate samples

Additional guidance was obtained from Quality Assurance/Quality Control Guidance for Removal Activities: Sampling QA/QC Plan and Data Validation Procedures (USEPA 1990) and Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (USEPA 1994). The validation results for the lead analyses are described in the following sections.

SECTION 2

LABORATORY QUALITY CONTROL

The following is a discussion of laboratory quality control procedures and results. A listing of all quality control samples and sample results is given in Table 1.

DEVIATIONS FROM QUALITY ASSURANCE PROJECT PLAN

In October, 1999, it was discovered that the laboratory had inadvertently omitted several procedures that were specified in the Quality Assurance Project Plan. These were:

1. All soil samples were required to be reported on a dry-weight basis, with percent moisture also reported. However, the laboratory originally reported samples on a wet-weight basis, and did not measure percent moisture.

2. All analytical batches of 20 or fewer soil samples were required to contain an MS/MSD on one of the project samples. In some cases MS/MSDs were derived from non-project samples.

3. All analytical batches of 20 or fewer soil samples were required to contain a laboratory sample duplicate on one of the project samples. In some cases laboratory sample duplicates were derived from non-project samples.

4. All analytical batches of 20 or fewer soil samples were required to contain a post-digestion spike. These were not conducted.

5. All analytical batches of 20 or fewer soil samples were required to contain a five-fold serial dilution if any of the samples in that analytical batch were above 50 mg/kg. These were not conducted.

As agreed to in a conference call on October 26, 1999 between Mike Mahoney (USEPA), Alana Lee (USEPA), Dave Diamond (Parsons) and Jan Barbas (Parsons), the following steps were taken to mitigate the omissions described above:

1. Remaining aliquots of all soil samples were analyzed for moisture content. These data were used to calculate dry-weight concentrations. For one sample batch, no remaining sample material was available. Therefore, the mean and standard deviation of the moisture content values were calculated for all other project samples. The mean moisture content plus three standard deviations was then used to calculate the dry-weight lead concentration for that batch.

For batches in which laboratory sample duplicates had not been derived from project samples, remaining aliquots of soil samples from those batches were used to run duplicate samples.

2. For batches in which MS/MSDs had not been derived from project samples, remaining aliquots of soil samples from those batches were used to run MS/MSD samples.

3. Post-digestion spikes were run using remaining aliquots of soil samples for all batches where MS/MSD results were outside of either accuracy or precision criteria.

4. Five-fold serial dilutions were run using remaining aliquots of soil samples for all batches where any of the samples in that analytical batch were above 50 mg/kg.

5. New laboratory control samples (LCSs) and Method Blanks were run according to method requirements for all new QC samples described above.

Completion of these steps was considered to bring the laboratory procedures into compliance with the objectives of the QAPjP.

TECHNICAL HOLDING TIME AND SAMPLE PRESERVATION

Holding times are the number of hours, days, or months elapsed between the time a sample is collected in the field and prepared and analyzed by the laboratory. Holding time limits and sample preservation techniques have been established for analytical methods to ensure that analytical data is representative of the actual environmental conditions from which the samples were obtained. EPA Method 6010 requires that all water samples be preserved by addition of nitric acid to a pH <2 and cooling to 4°C. No preservation is required for soil samples. All soil and water samples were preserved as required, and analyzed within the required 180 day holding time.

CALIBRATION BLANKS

Initial and continuing calibration blanks are used to verify the calibration and determine if contamination or memory effects are occurring between sample analyses. Initial and continuing calibration blanks were required to be free of lead contamination above the reporting limit (RL) of 50 milligrams per kilogram (mg/kg).

All initial and continuing calibration blanks associated with this data set were free of lead contamination above the RL of 50 mg/kg.

METHOD BLANKS

Method blanks are used to verify that the reagents and the sample preparation techniques used by the laboratory do not introduce contaminants that affect the analytical results. Method blanks were required to be free of lead contamination above the RL of 50 mg/kg.

All method blanks associated with this data set were free of lead contamination above the RL of 50 mg/kg.

CALIBRATIONS

The Inductively Coupled Plasma (ICP) - atomic emission spectrophotometer was calibrated daily before any sample analysis. The initial calibration verification (ICV) criterion states that analysis results for the ICV must fall within 90-110 percent recovery of the true value for lead.

All ICVs were within the stated limits. The continuing calibration verification (CCV) criterion is the same as ICV criteria. In addition, CCVs must be run at a frequency of 10 percent of sample analyses. All CCVs met the stated criterion with the exception of one CCV that had a percent recovery of 111.2 %. The samples affected by this are (from laboratory Run #1): 39922286 and 39922287. These samples were flagged as 'J' and re-analyzed later with an acceptable quality control (Run #5). Amended reports were issued.

MATRIX SPIKES

In order to assess the precision and accuracy of the data, MS/MSDs were required with every preparation batch of 20 or fewer soil samples. For precision, a control limit of 35 percent was required for the relative percent difference (RPD) between measurements on MS and MSD pairs. For accuracy, MS and MSD results were to fall within 75-125 percent recovery (%R).

All MS and MSD %R and/or RPD results associated with this data set were in control.

LABORATORY SAMPLE DUPLICATES

To further assess the precision of the data, a laboratory sample duplicate was required with every preparation batch of 20 or fewer soil samples. A control limit of 35 percent was required for the RPD between measurements on duplicate samples.

All laboratory sample duplicates associated with this data set were in control.

SERIAL DILUTIONS

In order to assess the presence of interferences in the samples, a serial dilution was required for one sample with every preparation batch of 20 or fewer soil samples. The analysis of the diluted sample should agree within 10% of the original determination when the result met or exceeded 50 times the method detection limit (MDL). If this control limit of 10% is exceeded all samples in the associated preparation batch are qualified as estimated and flagged "J". When an analysis yields a result below 50 times the MDL, dilution is more likely to affect the accuracy of the datum, the control limit of 10% becomes unreasonable, and the data remains unqualified.

All serial dilution results associated with this data set were in control with the exception of D-042-09, for which the serial dilution sample differed from the original sample 13.7 %D).

The serial dilution result exceeded 50 times the MDL, and had an RPD greater than 10%. The detected concentrations of lead were qualified as estimated "J" based on the result of the serial dilution.

POST DIGESTION SPIKES

In order to assess the presence of a possible matrix effect, a post digestion spike was required for one sample with every preparation batch of 20 or fewer soil samples. The post digestion spike results must fall within a control limit of 75-125%R for lead.

All post digestion spike results associated with the samples in this data set were in control.

LABORATORY CONTROL SAMPLES

In order to assess the laboratory's ability to perform the analysis successfully an LCS is required with every preparation batch of 20 or fewer samples of similar matrix. All soil and water LCS results must fall within 80-120%R for lead.

All soil and water LCS results associated with this data set were in control.

SECTION 3

FIELD QUALITY CONTROL

RINSATE BLANKS

A rinsate blank is used to assess cross-contamination brought about by improper decontamination procedures. Rinsate blanks were required to be free of lead contamination above the RL of 0.5 milligrams per liter (mg/L).

All rinsate blanks were found to be free of lead contamination above the RL of 0.5 mg/L.

FIELD DUPLICATES

Field duplicates are collected in order to assess the precision associated with sample heterogeneity and sampling procedures as well as laboratory procedures. Field duplicates were collected at a frequency of ten percent.

A control limit of 70% was required for the RPD between measurements on field duplicate pairs when the analytical results for either sample exceeded five times the reporting limit. In cases where the analytical result was below five times the reporting limit, the absolute difference between the two analytical results was to be no greater than the reporting limit.

Table 2 lists the primary and field duplicate samples taken at each property, the concentration of lead found in each sample, and the RPD or absolute difference calculated for each pair, depending on which criterion was applicable. All four field duplicate pairs associated with this data set were in control.

PERFORMANCE EVALUATION SAMPLES

Performance evaluation (PE) samples are samples prepared by an independent, third party using a quantity of analyte which is known to the preparer but unknown to the laboratory. The results reported for PE samples are used to judge how the laboratory may perform on actual field samples. Successful results for PE samples also support the ability to compare data from one project with that of others. The PE samples for this project were obtained from Environmental Resource Associates (ERA) and were submitted blind to the laboratory with typical field sample identifications along with actual field samples.

Three PE samples were submitted at different times over the duration of the Phase 3 Removal Action (RA) activities and subsequent confirmation sampling events. Results for these samples can be found in Data Quality Assessment Report No. 6 (Parsons 2000b). All PE sample analytical results were within the range specified by the preparer.

USEPA FIELD DUPLICATE SAMPLE RESULTS

The USEPA collected a total of 15 duplicate confirmation samples from each of the four properties by splitting confirmation soil sample in the field after homogenization by Parsons staff. These samples were then submitted by an EPA representative to the EPA Region 9 Laboratory in Richmond, California. The QAPjP does not require this sampling, therefore acceptance criteria have not been established and these data are presented for informational purposes only. The analytical results of the USEPA samples are presented in Table 3. A comparison of the USEPA samples with the corresponding confirmation samples collected by Parsons ES and analyzed by Forensic is presented in Table 4, along with listing of RPDs, calculated using the same method as for the Parsons field duplicate samples.

SECTION 4

SUMMARY

PRECISION

Precision is the measure of variability between individual sample measurements under prescribed conditions. The results of RPDs derived from MS/MSDs, laboratory duplicates and field duplicates demonstrate precision of the field and laboratory methods. Based on the agreement between duplicate analyses described previously, overall precision was acceptable for this data set.

ACCURACY

Accuracy is the degree of agreement between a measurement and an accepted reference or true value. The results of MS/MSD and LCS analyses when expressed in terms of %R demonstrate the accuracy of the method. MS/MSD spike recoveries indicate accuracy relevant to a unique sample matrix. LCS spike recoveries indicate accuracy relevant to all samples and matrices within an analytical batch lot and are strictly a measure of analytical accuracy conditions independent of samples and matrices. Based on the MS/MSD and LCS data described previously, overall accuracy was acceptable for this data set.

REPRESENTATIVENESS

Representativeness defines how accurately analytical results describe the environmental sample sent for analysis. Sample data are believed to be representative of the current site conditions. Furthermore, no data have been qualified as unusable due to blank contamination and all analytical holding times were met for all samples.

COMPARABILITY

Comparability measures the ability to compare data from one project with that of others. Comparability is achieved by adherence to standard sample collection and analysis procedures, use of standards traceable to documented sources, and successful participation on PE samples. Based on the results of this data quality assessment, and the successful analysis by the laboratory of the PE samples, the chemical data for this RA are judged to be comparable to chemical data collected for other projects and analyzed using similar protocols.

COMPLETENESS

Completeness is the amount of usable (non-rejected) data relative to the number of environmental samples collected and analyzed. The goal for completeness for chemical data

is 90%. As a result of this data quality assessment no data were qualified as rejected, "R". The validated data are of sufficient quality and quantity to support project decisions.

SECTION 5

REFERENCES

Parsons 1996a. Data Quality Assessment Report No. 1, Removal Site Inspection at Property Numbers 7,8,9,10,13,14,15,16,17,19,20,21,22,24,28 for Verdese Carter Park Project, Oakland, CA, June

Parsons 1996b. Removal Action Workplan for Verdese Carter Park Project, Oakland , CA

Parsons 1996c. Quality Assurance Project Plan for Verdese Carter Park Project, Oakland , CA, May

Parsons 1996d. Removal Site Inspection Technical Memorandum for Verdese Carter Park Project, Oakland, CA, June

Parsons 1997a. Data Quality Assessment Report No. 2, Removal Site Inspection at Property Numbers 1,2,3,4,5,11,12,18,23,25,26 for Verdese Carter Park Project, Oakland, CA, May

Parsons, 1997b, Data Quality Assessment Report No. 3 for Phase 1 and 2 RA Properties, Verdese Carter Park Project, Oakland, California

Parsons, 1998a, Data Quality Assessment Report No. 4, Site Investigation for Verdese Carter Park Project, Oakland , CA, April

Parsons 1998b, Draft Final Site Inspection Report for Verdese Carter Park Project, Oakland, California, September 1

Parsons 2000a, Site Inspection Report Addendum for Phase 3 Properties, Verdese Carter Park Project, Oakland, California, January 20.

Parsons 2000b, Data Quality Assessment Report No. 6, Verdese Carter Park Project, Oakland, CA, January.

CFR 1984. Code of Federal Regulations, 40 CFR 136, vol. 49, No. 209, page 43260, 26 October

USEPA 1990. Interim Final Quality Assurance/Quality Control Guidance for Removal Activities: Sampling QA/QC Plan and Data Validation Procedures, April

USEPA 1994. Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, February

TABLES

Table 1 not included in this copy

Table 1
Quality Control Data Summary

Notes:

Table 1 contains information for all quality control samples analyzed by Forensic for the Verdese Carter Park project. Therefore, the table contains data included in this and other reports.

Abbreviations and Terminology

1705, 1749, etc	The last 4 digits of the laboratory sample identification number
1mg/L, 10 mg/L, etc.	Data used to calibrate the instrument
Abs	Absorbance unit [-]
BLCS	Bulk Laboratory Control Sample
BLCSD	Bulk Laboratory Control Sample Duplicate
Calibration	The zero standard for calibration
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
Comment/Source	The source codes in the column are internal references for Forensic
DUP	Laboratory Duplicate
EI	Emission intensity [-]
ICB	Initial Calibration Blank
ICSAB	Interference Check Sample, Solution AB
ICV	Initial Calibration Verification
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PB	Preparation Blank
PS	Post Digestion Spike
r	Correlation coefficient
RPD	Relative Percent Difference
SD	Serial Dilution
Standard 1, 2, 3, etc.	Data used to calibrate the instrument

.able 1
Quality Control Sample Summary

SampleName	Report #	Associated Run ID	Run ID Number	Expected Value (mg/L)	ConcRead (mg/L)	Recovery %	Comment/ Source	Weight	Dilution	Extract Volume	Date Digested	RPD
						Soil Analysis						
Calibration	M028449, M028453, M028456, M028459, M028462	14212	14212			r = 0.999695			1	40		
Standard 1	M028449, M028453, M028456, M028459, M028462	14212	14212	0.3	Abs = .007		99W1233		1	40		
Standard 2	M028449, M028453, M028456, M028459, M028462	14212	14212	4	Abs = .079		99W1249		1	40		
Standard 3	M028449, M028453, M028456, M028459, M028462	14212	14212	8	Abs = .152		99W1224		1	40		
Standard 4	M028449, M028453, M028456, M028459, M028462	14212	14212	15	Abs = .274		99W1241		1	40		
ICV	M028449, M028453, M028456, M028459, M028462	14212	14212	10	10.1100	101.1%	99W1215		1	40		
ICB	M028449, M028453, M028456, M028459, M028462	14212	14212	0.15	0.0300	ND			1	40		
PB 1040	M028449, M028453, M028456, M028459, M028462	14212	14212	0.3	-0.0200	ND			1	40	5/24/99	
BLCS 1040	M028449, M028453, M028456, M028459, M028462	14212	14212	14.1	15.1600	107.5%	98SS048	1.0304	1	40	5/24/99	
BLCSD 1040	M028449, M028453, M028456, M028459, M028462	14212	14212	13.7	14.8400	108.3%	98SS048	0.9967	1	40	5/24/99	1.19
CCV	M028449, M028453, M028456, M028459, M028462	14212	14212	10	9.9800	99.8%	99W1215		1	40		
CCB	M028449, M028453, M028456, M028459, M028462	14212	14212	0.15	0.0100	ND			1	40		
CCV	M028449, M028453, M028456, M028459, M028462	14212	14212	10	10.0600	100.6%	99W1215		1	40		
CCB	M028449, M028453, M028456, M028459, M028462	14212	14212	0.15	0.0200	ND			1	40		
SD 3655	M028449, M028453, M028456, M028459, M028462	14212	14212	12.37	12.1000	97.8%			5	40		
						Soil Analysis						
Calibration	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875			r = 0.999925			1	40		
Standard 2	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	1	EI = 190278		99W1290		1	40		
Standard 3	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	5	EI = 826760		99W1227		1	40		
Standard 4	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	25	EI = 4295509		99W1228		1	40		
ICV	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	5	4.7960	95.9%	99W1291		1	40		
ICB	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	0.15	0.0717	ND			1	40		
ICSAB	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	1	1.0680	106.8%	99W1265		1	40		
CCV	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	5	4.7700	95.4%	99W1291		1	40		
CCB	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	0.15	0.0307	ND			1	40		
PB 1334	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	0.3	0.0892	ND			1	40	7/30/99	
BLCS 1334	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	13.43	12.8100	95.4%	98SS048	0.9783	1	40	7/30/99	
BLCSD 1334	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	13.65	13.0200	95.4%	98SS048	0.9948	1	40	7/30/99	0.05
MS 1705	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	31.65	31.5400	99.7%	98SS080	1.9886	1	40	7/30/99	
MSD 1705	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	31.95	29.6300	92.7%	98SS080	2.0168	1	40	7/30/99	7.65
1705	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875		21.7900			2.0019	1	40	7/30/99	
CCV	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	5	4.8510	103.1%	99W1291		1	40		
CCB	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	0.15	0.1236	ND			1	40		
CCB	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	0.15	0.0847	ND			1	40		
CCV	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	5	4.7680	104.9%	99W1291		1	40		
CCB	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	0.15	0.0852	ND			1	40		
1749	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875		16.8300			2.046	1	40	7/30/99	
SD 1749	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	16.8300	19.5120	86.3%	*LOW*		4	40		
CCV	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	5	4.8490	103.1%	99W1291		1	40		
CCB	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	0.15	0.1101	ND			1	40		
ICSAB	M029774, M029778, M029782, M029785, M029788, M029791	14875	14875	1	1.0420	96.0%	99W1265					
						Soil Analysis						
Calibration	M029940, M029941, M030046, M029787, M029942, M030047, M029969, M030044	1	1			r =1.000000			1	40		
1 mg/L		0		1	EI = 520		99W1290		1			
ICB	M029940, M029941, M030046, M029787, M029942, M030047, M029969, M030044	1	1	0.15	-0.0022	ND			1	40		
ICV	M029940, M029941, M030046, M029787, M029942, M030047, M029969, M030044	1	1	1	1.0100	101.0%	99W1284		1	40		
ICSAB	M029940, M029941, M030046, M029787, M029942, M030047, M029969, M030044	1	1	1	0.8170	81.7%	99W1265		1	40		
CCB	M029940, M029941, M030046, M029787, M029942, M030047, M029969, M030044	1	1	0.15	-0.0088	ND			1	40		
CCV	M029940, M029941, M030046, M029787, M029942, M030047, M029969, M030044	1	1	1	1.0100	101.0%	99W1284		1	40		

Table 1
Quality Control Sample Summary

SampleName	Report #	Associated Run ID	Run ID Number	Expected Value (mg/L)	ConcRead (mg/L)	Recovery %	Comment/ Source	Weight	Dilution	Extract Volume	Date Digested	RPD
PB 1358	M029940, M029941, M030046, M029787, M029942, M030047, M029969, M030044	1	1	0.3	-0.0045	ND			1	40	8/14/99	
LCS 1358	M029940, M029941, M030046, M029787, M029942, M030047, M029969, M030044	1	1	1	1.0100	101.0%	99SS066/67		1	40	8/14/99	
LCSD 1358	M029940, M029941, M030046, M029787, M029942, M030047, M029969, M030044	1	1	1	1.0200	102.0%	99SS066/67		1	40	8/14/99	0.99
MS 2599	M029940, M029941, M030046, M029787, M029942, M030047, M029969, M030044	1	1	2.22	2.0400	91.9%	99SS066/67	1.0451	1	40	8/14/99	
MSD 2599	M029940, M029941, M030046, M029787, M029942, M030047, M029969, M030044	1	1	2.21	2.0500	92.7%	99SS066/67	1.0109	1	40	8/14/99	3.82
2599	M029940, M029941, M030046, M029787, M029942, M030047, M029969, M030044	1	1		0.2150			1.0246	1	40	8/14/99	
CCB	M029940, M029941, M030046, M029787, M029942, M030047, M029969, M030044	1	1	0.15	-0.0074	ND			1	40		
CCV	M029940, M029941, M030046, M029787, M029942, M030047, M029969, M030044	1	1	1	1.0200	102.0%	99W1284		1	40		
CCB	M029940, M029941, M030046, M029787, M029942, M030047, M029969, M030044	1	1	0.15	0.2340	*High*	RDL>CCB>MDL		1	40		
CCV	M029940, M029941, M030046, M029787, M029942, M030047, M029969, M030044	1	1	1	1.1116	111.2%	*HIGH*		1	40		
ICSAB	M029940, M029941, M030046, M029787, M029942, M030047, M029969, M030044	1	1	1	0.8653	86.5%	99W1265		1	40		
						Soil Analysis						
Calibration	M030045, M030048	5	5			r = 1.000000			1	50		
1 mg/L	M030045, M030048	5	5	1	EI = 464.9		99W1290		1	50		
10 mg/L	M030045, M030048	5	5	10	EI = 4409.4		99W1314		1	50		
ICB	M030045, M030048	5	5	0.15	0.0074	ND			1	50		
ICV	M030045, M030048	5	5	10	10.0190	100.2%	99W1284		1	50		
ICSAB	M030045, M030048	5	5	1	0.9535	95.4%	99W1265		1	50		
CCB	M030045, M030048	5	5	0.15	-0.0240	ND			1	50		
CCV	M030045, M030048	5	5	10	10.0430	100.4%	99W1284		1	50		
PB 1368	M030045, M030048	5	5	0.3	-0.0240	ND			1	50	8/20/99	
LCS 1368	M030045, M030048	5	5	1	1.0129	101.3%	99SS066/67		1	50	8/20/99	
LCSD 1368	M030045, M030048	5	5	1	1.0104	101.0%	99SS066/67		1	50	8/20/99	0.25
MS 2699	M030045, M030048	5	5	23.72	18.6540	0	N - 4x Rule	0.9892	1	50	8/20/99	
MSD 2699	M030045, M030048	5	5	23.87	23.7500	99.5%	99SS066/67	0.9967	1	50	8/20/99	23.29
2699	M030045, M030048	5	5		20.1000			1.0082	1	50	8/20/99	
CCB	M030045, M030048	5	5	0.15	0.0145	ND			1	50		
CCV	M030045, M030048	5	5	10	9.9689	99.7%	99W1284		1	50		
CCB	M030045, M030048	5	5	0.15	0.0176	ND			1	50		
CCV	M030045, M030048	5	5	10	10.1650	101.7%	99W1284		1	50		
CCB	M030045, M030048	5	5	0.15	-0.0197	ND			1	50		
CCV	M030045, M030048	5	5	10	9.9030	99.0%	99W1284		1	50		
ICSAB	M030045, M030048	5	5	1	0.9742	97.4%	99W1265		1	50		
						Soil Analysis						
Calibration	M030338	15228	15228			r = 1.000000			1	50		
1 mg/L	M030338	15228	15228	1	EI = 377.4		99W1313		1	50		
10 mg/L	M030338	15228	15228	10	EI = 3698.4		99W1314		1	50		
ICB	M030338	15228	15228	0.15	0.0033	ND			1	50		
ICV	M030338	15228	15228	10	9.9918	99.9%	99W1315		1	50		
ICSAB	M030338	15228	15228	1	0.7055	70.6%	99W1265		1	50		
CCB	M030338	15228	15228	0.15	-0.0022	ND			1	50		
CCV	M030338	15228	15228	10	9.9860	99.9%	99W1315		1	50		
PB 1394	M030338	15228	15228	0.3	-0.0047	ND			1	50	09/01/99	
BLCS 1394	M030338	15228	15228	10.7	11.4710	107.4%	99SS048	0.9729	1	50	09/01/99	
BLCSD 1394	M030338	15228	15228	10.8	10.7820	99.8%	99SS048	0.9843	1	50	09/01/99	7.36
MS 3997	M030338	15228	15228	12.13	12.1190	99.9%	99SS080	0.9934	1	50	09/01/99	
MSD 3997	M030338	15228	15228	12.17	12.0540	99.0%	99SS080	1.0141	1	50	09/01/99	2.60
3997	M030338	15228	15228		2.1600			1.0089	1	50	09/01/99	
CCB	M030338	15228	15228	0.15	0.0017	ND			1	50		
CCV	M030338	15228	15228	10	9.9586	99.6%	99W1315		1	50		

Quality Control Sample Summary

SampleName	Report #	Associated Run ID	Run ID Number	Expected Value (mg/L)	ConcRead (mg/L)	Recovery %	Comment/ Source	Weight	Dilution	Extract Volume	Date Digested	RPD
DUP 3997	M030338	15228	15228	2.151	1.8245	84.8%		1.0048	1	50	09/01/99	16.44
CCB	M030338	15228	15228	0.02	-0.0040	ND			1	50		
CCV	M030338	15228	15228	10	9.9376	99.4%	99W1315		1	50		
PB 1396	M030339	15229	15229	0.3	-0.0046	ND			1	50	09/01/99	
BLCS 1396	M030339	15229	15229	10.2	10.8310	106.2%	99SS048	0.929	1	50	09/01/99	
CCB	M030339	15229	15229	0.15	-0.0010	ND			1	50		
CCV	M030339	15229	15229	10	9.8357	98.4%	99W1315		1	50		
BLCSD 1396	M030339	15229	15229	10.8	10.8220	100.1%	99SS048	0.9843	1	50	09/01/99	5.86
MS 4012	M030339	15229	15229	19.78	21.0820	106.6%	99SS080	1.0004	1	50	09/01/99	
MSD 4012	M030339	15229	15229	19.83	19.3170	97.4%	99SS080	1.0054	1	50	09/01/99	9.24
4012	M030339	15229	15229		9.8000			1.0021	1	50	09/01/99	
DUP 4012	M030339	15229	15229	10.00823	8.9264	89.2%		1.0231	1	50	09/01/99	11.40
CCB	M030339	15229	15229	0.15	-0.0004	ND			1	50		
CCV	M030339	15229	15229	10	9.8497	98.5%	99W1315		1	50		
4020		15529	15529		12.1000			1.0577	1	50	09/01/99	
DUP 4020	M030339	15229	15229	11.750	15.4230	131.6		1.0271	1	50	09/01/99	27.03
MS 4020	M030339	15229	15229	21.92	25.7030	117.3%	99SS080	1.0418	1	50	09/01/99	
MSD 4020	M030339	15229	15229	21.92	25.1130	114.6%	99SS080	1.0416	1	50	09/01/99	2.30
CCB	M030339	15229	15229	0.15	0.0061	ND			1	50		
CCV	M030339	15229	15229	10	9.7740	97.7%	99W1315		1	50		
ICSAB	M030339	15229	15229	1	0.9249	92.5%	99W1350		1	50		
						Soil Analysis						
Calibration	M030388, M030466, M030467, M030480	15302	15302			r = 1.000000			1	50		
1 mg/L	M030388, M030466, M030467, M030480	15302	15302	1	EI = 949.0		99W1313		1	50		
10 mg/L	M030388, M030466, M030467, M030480	15302	15302	10	EI = 4032.6		99W1314		1	50		
ICB	M030388, M030466, M030467, M030480	15302	15302	0.15	0.0179	ND			1	50		
ICV	M030388, M030466, M030467, M030480	15302	15302	10	9.8942	98.9%	99W1315		1	50		
ICSAB	M030388, M030466, M030467, M030480	15302	15302	1	0.9404	94.0%	99W1350		1	50		
PB 1412	M030388, M030466, M030467, M030480	15302	15302	0.3	-0.0130	ND			1	50	09/08/99	
LCS 1412	M030388, M030466, M030467, M030480	15302	15302	10	10.9070	109.1%	99SS080		1	50	09/08/99	
CCB	M030388, M030466, M030467, M030480	15302	15302	0.15	-0.0080	ND			1	50		
CCV	M030388, M030466, M030467, M030480	15302	15302	10	9.9160	99.2%	99W1315		1	50		
LCSD 1412	M030388, M030466, M030467, M030480	15302	15302	10	10.9680	109.7%	99SS080		1	50	09/08/99	0.56
MS 4515	M030388, M030466, M030467, M030480	15302	15302	12.86	13.1690	102.4%	99SS080	1.0268	1	50	09/08/99	
MSD 4515	M030388, M030466, M030467, M030480	15302	15302	12.86	12.6680	98.5%	99SS080	1.0243	1	50	09/08/99	3.63
4515	M030388, M030466, M030467, M030480	15302	15302		2.8000			1.0041	1	50	09/08/99	
CCB	M030388, M030466, M030467, M030480	15302	15302	0.15	-0.0060	ND			1	50		
CCV	M030388, M030466, M030467, M030480	15302	15302	10	9.9255	99.3%	99W1315		1	50		
CCB	M030388, M030466, M030467, M030480	15302	15302	0.15	-0.0120	ND			1	50		
CCV	M030388, M030466, M030467, M030480	15302	15302	10	9.8858	98.9	99W1315		1	50		
PB 1410	M030388, M030466, M030467, M030480	15302	15302	0.3	-0.0150	ND			1	50	09/08/99	
LCS 1410	M030388, M030466, M030467, M030480	15302	15302	1	1.0654	106.5%	99SS080		1	50	09/08/99	
LCSD 1410	M030388, M030466, M030467, M030480	15302	15302	1	1.0563	105.6%	99SS080		1	50	09/08/99	0.86
MS 4211	M030388, M030466, M030467, M030480	15302	15302	10.42	12.7590	122.4%	99SS080	1.004	1	50	09/08/99	
MSD 4211	M030388, M030466, M030467, M030480	15302	15302	10.40	10.7700	103.6%	99SS080	1.0005	1	50	09/08/99	16.56
4211	M030388, M030466, M030467, M030480	15302	15302		8.4500			1.007	1	50	09/08/99	
CCB	M030388, M030466, M030467, M030480	15302	15302	0.15	-0.0030	ND			1	50		
CCV	M030388, M030466, M030467, M030480	15302	15302	10	9.8314	98.3%	99W1315		1	50		
CCB	M030388, M030466, M030467, M030480	15302	15302	0.15	0.0000	ND			1	50		

Quality Control Sample Summary

SampleName	Report #	Associated Run ID	Run ID Number	Expected Value (mg/L)	ConcRead (mg/L)	Recovery %	Comment/ Source	Weight	Dilution	Extract Volume	Date Digested	RPD
CCV	M030388, M030466, M030467, M030480	15302	15302	10	9.7925	97.9%	99W1315		1	50		
ICSAB	M030388, M030466, M030467, M030480	15302	15302	1	0.9262	92.6%	99W1350		1	50		
						Soil Analysis						
Calibration						r = 1.000000			1	50		
1 mg/L	M030551	15359	15359	1	EI = 410.5		99W1313		1	50		
10 mg/L	M030551	15359	15359	10	EI = 3865.9		99W1314		1	50		
CCB	M030551	15359	15359	0.15	-0.0090	ND			1	50		
CCV	M030551	15359	15359	10	10.2500	102.5%	99W1315		1	50		
ICSAB	M030551	15359	15359	1	0.9968	99.7%	99W1350		1	50		
PB 1420	M030551	15359	15359	0.3	-0.0080	ND			1	50	09/14/99	
LCS 1420	M030551	15359	15359	1	1.0167	101.7%	99SS080		1	50	09/14/99	
LCSD 1420	M030551	15359	15359	1	1.0189	101.9%	99SS048		1	50	09/14/99	0.22
BLCS 1420	M030551	15359	15359	11.2	11.3620	101.4	99SS048	1.0032	1	50	09/14/99	
BLCSD 1420	M030551	15359	15359	11.2	11.5620	103.2	99SS048	1.001	1	50	09/14/99	1.96
MS 4858	M030551	15359	15359	10.81	11.3640	105.1%	99SS080	1.0142	1	50	09/14/99	
MSD 4858	M030551	15359	15359	10.80	11.4370	105.9%	99SS080	1.0021	1	50	09/14/99	1.84
CCB	M030551	15359	15359	0.15	-0.0030	ND			1	50		
CCV	M030551	15359	15359	10	10.1180	101.2%	99W1315		1	50		
4858					0.8070			1.0084	1	50	09/14/99	
DUP 4858	M030551	15359	15359	0.804	0.7857	97.7%		1.0047	1	50	09/14/99	2.31
CCB	M030551	15359	15359	0.15	0.0579	ND			1	50		
CCV	M030551	15359	15359	10	10.2330	102.3%	99W1315		1	50		
ICSAB	M030551	15359	15359	1	0.9972	99.7%	99W1350		1	50		
						Soil Analysis						
Calibration	M030635	15395	15395			r = 1.000000			1	50		
1 mg/L	M030635	15395	15395	1	EI = 353.0		99W1313		1	50		
10 mg/L	M030635	15395	15395	10	EI = 3427.6		99W1314		1	50		
CCB	M030635	15395	15395	0.15	0.0086	ND			1	50		
CCV	M030635	15395	15395	10	9.9245	99.2%	99W1315		1	50		
ICSAB	M030635	15395	15395	1	0.9637	96.4%	99W1350		1	50		
PB 1428	M030635	15395	15395	0.3	0.0149	ND			1	50	09/17/99	
LCS 1428	M030635	15395	15395	1	1.0184	101.8%	99SS066/67		1	50	09/17/99	
LCSD 1428	M030635	15395	15395	1	1.0196	102.0%	99SS066/67		1	50	09/17/99	0.12
MS 5370	M030635	15395	15395	14.97	15.1290	101.0%	99SS066/67	1.0012	1	50	09/17/99	
MSD 5370	M030635	15395	15395	15.23	15.0380	98.7%	99SS066/67	1.0213	1	50	09/17/99	2.59
5370	M030635	15395	15395		13.2000			1.0188	1	50	09/17/99	
CCB	M030635	15395	15395	0.15	0.0068	ND			1	50		
CCV	M030635	15395	15395	10	9.8463	98.5%	99W1315		1	50		
ICSAB	M030635	15395	15395	1	0.9558	95.6%	99W1350		1	50		
						Soil Analysis						
Calibration	M030691	15421	15421			r = 1.000000			1	50		
1 mg/L	M030691	15421	15421	1	EI = 352.0		99W1313		1	50		
10 mg/L	M030691	15421	15421	10	EI = 3494.0		99W1314		1	50		
CCB	M030691	15421	15421	0.15	-0.0070	ND			1	50		
CCV	M030691	15421	15421	10	9.8654	98.7%	99W1315		1	50		
ICSAB	M030691	15421	15421	1	0.9364	93.6%	99W1350		1	50		
PB 1432	M030691	15421	15421	0.3	-0.0140	ND			1	50	09/21/99	
LCS 1432	M030691	15421	15421	5	5.2961	105.9%	99SS080		1	50	09/21/99	
LCSD 1432	M030691	15421	15421	5	5.3391	106.8%	99SS080		1	50	09/21/99	0.81
MS 5667	M030691	15421	15421	21.03	21.5330	102.4%	99SS080	0.9959	1	50	09/21/99	

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Quality Control Sample Summary

SampleName	Report #	Associated Run ID	Run ID Number	Expected Value (mg/L)	ConcRead (mg/L)	Recovery %	Comment/ Source	Weight	Dilution	Extract Volume	Date Digested	RPD
MSD 5667	M030691	15421	15421	21.10	21.5950	102.4%	99SS080	1.0016	1	50	09/21/99	0.28
5667	M030691	15421	15421		11.1000			1.0019	1	50	09/21/99	
CCB	M030691	15421	15421	0.15	-0.0100	ND			1	50		
CCV	M030691	15421	15421	10	9.8910	98.9%	99W1315		1	50		
DUP 5667	M030691	15421	15421	11.16276	11.1020	99.5%		1.0082	1	50	09/21/99	0.61
CCB	M030691	15421	15421	0.15	-0.0170	ND			1	50		
CCV	M030691	15421	15421	10	9.6414	96.4%	99W1315		1	50		
ICSAB	M030691	15421	15421	1	0.9163	91.6%	99W1350		1	50		
						Soil Analysis						
Calibration	M030801, M030812	15481	15481			r = 1.000000			1	50		
10 mg/L	M030801, M030812	15481	15481	10	EI = 3735.0		99W1314		1	50		
CCB	M030801, M030812	15481	15481	0.15	-0.0550	ND			1	50		
CCV	M030801, M030812	15481	15481	10	9.9455	99.5%	99W1315		1	50		
ICSAB	M030801, M030812	15481	15481	1	0.9368	93.7%	99W1350		1	50		
PB 1446	M030801, M030812	15481	15481	0.3	-0.0810	ND			1	50	09/28/99	
LCS 1446	M030801, M030812	15481	15481	5	5.4140	108.3%	99SS080		1	50	09/28/99	
LCSD 1446	M030801, M030812	15481	15481	5	5.4693	109.4%	99SS080		1	50	09/28/99	1.02
MS 6278	M030801, M030812	15481	15481	13.62	14.5000	106.5%	99SS080	1.0158	1	50	09/28/99	
MSD 6278	M030801, M030812	15481	15481	13.59	14.3000	105.2%	99SS080	1.0081	1	50	09/28/99	0.63
CCB	M030801, M030812	15481	15481	0.15	-0.0830	ND			1	50		
CCV	M030801, M030812	15481	15481	10	9.8312	98.3%	99W1315		1	50		
CCB	M030801, M030812	15481	15481	0.15	-0.0920	ND			1	50		
CCV	M030801, M030812	15481	15481	10	9.7270	97.3%	99W1315		1	50		
6278	M030801, M030812	15481	15481		3.6400			1.0217	1	50	09/28/99	
DUP 6278	M030801, M030812	15481	15481	3.722	3.6859	99.0%		1.0448	1	50	09/28/99	0.98
CCB	M030801, M030812	15481	15481	0.15	-0.1070	ND			1	50		
CCV	M030801, M030812	15481	15481	10	9.7660	97.7%	99W1315		1	50		
ICSAB	M030801, M030812	15481	15481	1	0.8182	81.8%	99W1350		1	50		
						Soil Analysis						
Calibration	M030827	15505	15505			r = 1.000000			1	50		
1 mg/L	M030827	15505	15505	1	EI = 331.5		99W1313		1	50		
10 mg/L	M030827	15505	15505	10	EI = 3238.1		99W1314		1	50		
ICB	M030827	15505	15505	0.15	-0.0053	ND			1	50		
ICV	M030827	15505	15505	10	9.8040	98.0%	99W1315		1	50		
PB 1450	M030827	15505	15505	0.3	-0.0130	ND			1	50	09/29/99	
LCS 1450	M030827	15505	15505	5	5.4622	109.2%	99SS080		1	50	09/29/99	
LCSD 1450	M030827	15505	15505	5	5.4362	108.7%	99SS080		1	50	09/29/99	0.48
MS 6323	M030827	15505	15505	16.35	16.4180	100.4%	99SS080	1.0189	1	50	09/29/99	
MSD 6323	M030827	15505	15505	16.26	16.3930	100.8%	99SS080	1.005	1	50	09/29/99	1.22
CCB	M030827	15505	15505	0.15	-0.0147	ND			1	50		
CCV	M030827	15505	15505	10	9.7390	97.4%	99W1315		1	50		
6323	M030827	15505	15505		6.2500			1.0028	1	50	09/29/99	
DUP 6323	M030827	15505	15505	6.377	6.2301	97.7%		1.0232	1	50	09/29/99	2.33
CCB	M030827	15505	15505	0.15	0.0083	ND			1	50		
CCV	M030827	15505	15505	10	9.6840	96.8%	99W1315		1	50		
CCB	M030827	15505	15505	0.15	-0.0082	ND			1	50		
CCV	M030827	15505	15505	10	9.7090	97.1%	99W1315		1	50		
ICSAB	M030827	15505	15505	1	0.8277	82.8%	99W1350		1	50		
						Soil Analysis						
Calibration	M030881	15551	15551			r = 1.000000			1	50		

Table 1
Quality Control Sample Summary

SampleName	Report #	Associated Run ID	Run ID Number	Expected Value (mg/L)	ConcRead (mg/L)	Recovery %	Comment/ Source	Weight	Dilution	Extract Volume	Date Digested	RPD
1 mg/L	M030881	15551	15551	1	EI = 351.5		99W1313		1	50		
10 mg/L	M030881	15551	15551	10	EI = 3356.3		99W1314		1	50		
ICB	M030881	15551	15551	0.15	-0.0060	ND			1	50		
ICV	M030881	15551	15551	10	9.9800	99.8%	99W1315		1	50		
ICSAB	M030881	15551	15551	1	0.8730	87.3%	99W1350		1	50	10/1/99	
PB 1458	M030881	15551	15551	0.3	-0.0117	ND			1	50	10/1/99	
LCS 1458	M030881	15551	15551	5	5.5000	110.0%	99SS080		1	50	10/1/99	
LSD 1458	M030881	15551	15551	5	5.5800	111.6%	99SS080		1	50	10/1/99	1.44
MS 6545	M030881	15551	15551	11.15	11.0000	98.6%	99SS080	0.9891	1	50	10/1/99	
MSD 6545	M030881	15551	15551	11.21	11.8000	105.2%	99SS080	1.0391	1	50	10/1/99	2.09
6545	M030881	15551	15551		1.1700			1.0025	1	50	10/1/99	
DUP 6545	M030881	15551	15551	1.159	1.1600	100.0%		0.9935	1	50	10/1/99	0.04
CCB	M030881	15551	15551	0.15	-0.0129	ND			1	50		
CCV	M030881	15551	15551	10	9.9500	99.5%	99W1315		1	50		
CCB	M030881	15551	15551	0.15	-0.0083	ND			1	50		
CCV	M030881	15551	15551	10	9.9510	99.5%	99W1315		1	50		
ICSAB	M030881	15551	15551	1	0.8885	88.9%	99W1350		1	50		
PB 1460	M030914	15560	15560	0.03	-0.0146	ND			1	50	10/4/99	
LCS 1460	M030914	15560	15560	5	5.3993	108.0%	99SS080		1	50	10/4/99	
LCSD 1460	M030914	15560	15560	5	5.2462	104.9%	99SS080		1	50	10/4/99	2.88
MS 6732	M030914	15560	15560	10.80	11.1250	103.0%	99SS080	1.0098	1	50	10/4/99	
MSD 6732	M030914	15560	15560	10.81	11.2030	103.6%	99SS080	1.0243	1	50	10/4/99	0.73
6732	M030914	15560	15560		0.7980			1.0062	1	50	10/4/99	
DUP 6733	M030914	15560	15560	0.807	0.7928	98.3%		1.0174	1	50	10/4/99	1.76
CCB	M030914	15560	15560	0.15	-0.0058	ND			1	50		
CCV	M030914	15560	15560	10	9.9508	99.5%	99W1315		1	50		
CCB	M030914	15560	15560	0.15	-0.0033	ND			1	50		
CCV	M030914	15560	15560	10	9.9544	99.5%	99W1315		1	50		
ICSAB	M030914	15560	15560	1	0.8905	89.1%	99W1350		1	50		
						Soil Analysis						
Calibration	M031032	15624	15624			r = 1.000000			1	50		
1 mg/L	M031032	15624	15624	1	EI = 326.7		99W1313		1	50		
10 mg/L	M031032	15624	15624	10	EI = 3224.4		99W1314		1	50		
CCB	M031032	15624	15624	0.15	-0.0150	ND			1	50		
CCV	M031032	15624	15624	10	9.9569	99.6%	99W1315		1	50		
ICSAB	M031032	15624	15624	1	0.8466	84.7%	99W1350		1	50		
PB 1468	M031032	15624	15624	0.3	-0.0220	ND			1	50	10/11/99	
LCS 1468	M031032	15624	15624	5	5.4246	108.5%	99SS080		1	50	10/11/99	
LCSD 1468	M031032	15624	15624	5	5.4610	109.2%	99SS080		1	50	10/11/99	0.67
MS 7282	M031032	15624	15624	17.63	12.2680	69.6%	N / 99SS080	0.98	1	50	10/11/99	
MSD 7282	M031032	15624	15624	17.76	13.3780	75.3%	99SS080	0.9964	1	50	10/11/99	7.00
7282	M031032	15624	15624		7.7900			1.0004	1	50	10/11/99	
DUP 7282	M031032	15624	15624	7.769	8.2022	105.6%		0.9977	1	50	10/11/99	5.43
CCB	M031032	15624	15624	0.15	-0.0110	ND			1	50		
CCV	M031032	15624	15624	10	9.7301	97.3%	99W1315		1	50		
CCB	M031032	15624	15624	0.15	-0.0240	ND			1	50		
CCV	M031032	15624	15624	10	9.9116	99.1%	99W1315		1	50		
ICSAB	M031032	15624	15624	1	0.8347	83.5%	99W1350		1	50		
						Soil Analysis						
Calibration	M031107	15670	15670			r = 1.000000			1	50		
1 mg/L	M031107	15670	15670	1	EI = 279.8		99W1313		1	50		

Quality Control Sample Summary

SampleName	Report #	Associated Run ID	Run ID Number	Expected Value (mg/L)	ConcRead (mg/L)	Recovery %	Comment/ Source	Weight	Dilution	Extract Volume	Date Digested	RPD
10 mg/L	M031107	15670	15670	10	EI = 2700.8		99W1314		1	50		
CCB	M031107	15670	15670	0.15	0.0007	ND			1	50		
CCV	M031107	15670	15670	10	10.2890	102.9%	99W1315		1	50		
ICSAB	M031107	15670	15670	1	0.9109	91.1%	99W1350		1	50		
PB 1478	M031107	15670	15670	0.3	-0.0050	ND			1	50	10/14/99	
LCS 1478	M031107	15670	15670	5	5.6400	112.8%	99SS080		1	50	10/14/99	
LCSD 1478	M031107	15670	15670	5	5.7096	114.2%	99SS080		1	50	10/14/99	1.23
CCB	M031107	15670	15670	0.15	-0.0030	ND			1	50		
CCV	M031107	15670	15670	10	10.0750	100.8%	99W1315		1	50		
CCB	M031107	15670	15670	0.15	-0.0040	ND			1	50		
CCV	M031107	15670	15670	10	10.5740	105.7%	99W1315		1	50		
MS 7592	M031107	15670	15670	10.93	12.2800	112.3%	99SS080	1.0047	1	50	10/14/99	
MSD 7592	M031107	15670	15670	10.95	12.0200	109.8%	99SS080	1.0247	1	50	10/14/99	4.11
7592	M031107	15670	15670		0.9410			1.0153	1	50	10/14/99	
DUP 7592	M031107	15670	15670	0.912	0.9713	106.5%		0.9838	1	50	10/14/99	6.32
CCB	M031107	15670	15670	0.15	-0.0070	ND			1	50		
CCV	M031107	15670	15670	10	10.4940	104.9%	99W1315		1	50		
ICSAB	M031107	15670	15670	1	0.9325	93.3%	99W1350		1	50		
						Soil Analysis						
Calibration	M031172	15701	15701			r = 1.000000			1	50		
1 mg/L	M031172	15701	15701	1	EI = 284.4		99W1313		1	50		
10 mg/L	M031172	15701	15701	10	EI = 2799.5		99W1314		1	50		
CCB	M031172	15701	15701	0.15	0.0053	ND			1	50		
CCV	M031172	15701	15701	10	9.7070	97.1%	99W1315		1	50		
ICSAB	M031172	15701	15701	1	0.8906	89.1%	99W1350		1	50		
CCB	M031172	15701	15701	0.015	0.0009	ND			1	50		
CCV	M031172	15701	15701	10	9.7160	97.2%	99W1315		1	50		
PB 1484	M031172	15701	15701	0.3	0.0068	ND			1	50	10/18/99	
LCS 1484	M031172	15701	15701	5	5.4774	109.5%	99SS080		1	50	10/18/99	
LCSD 1484	M031172	15701	15701	5	5.4530	109.1%	99SS080		1	50	10/18/99	0.45
MS 7852	M031172	15701	15701	14.05	13.6570	97.2%	99SS080	1.0232	1	50	10/18/99	
MSD 7852	M031172	15701	15701	14.06	13.7690	97.9%	99SS080	1.0264	1	50	10/18/99	0.50
CCB	M031172	15701	15701	0.15	0.0014	ND			1	50		
CCV	M031172	15701	15701	10	9.5521	95.5%	99W1315		1	50		
7852	M031172	15701	15701		3.9700			1.0042	1	50	10/18/99	
DUP 7852	M031172	15701	15701	3.967	3.8882	98.0%		1.0035	1	50	10/18/99	2.01
CCB	M031172	15701	15701	0.15	0.0036	ND			1	50		
CCV	M031172	15701	15701	10	9.6000	96.0%	99W1315		1	50		
ICSAB	M031172	15701	15701	1	0.8605	86.1%	99W1350		1	50		
						Soil Analysis						
Calibration	M031231	15739	15739			r = 1.000000			1	50		
1 mg/L	M031231	15739	15739	1	EI = 282.2		99W1313		1	50		
10 mg/L	M031231	15739	15739	10	EI = 2823.8		99W1314		1	50		
CCB	M031231	15739	15739	0.15	-0.0100	ND			1	50		
CCV	M031231	15739	15739	10	9.6127	96.1%	99W1315		1	50		
ICSAB	M031231	15739	15739	1	0.8303	83.0%	99W1350		1	50		
PB 1492	M031231	15739	15739	0.3	-0.0060	ND			1	50	10/20/99	
LCS 1492	M031231	15739	15739	5	5.4035	108.1%	99SS080		1	50	10/20/99	
LCSD 1492	M031231	15739	15739	5	5.4611	109.2%	99SS080		1	50	10/20/99	1.06
MS 8056	M031231	15739	15739	11.03	10.7610	97.6%	99SS080	1.0178	1	50	10/20/99	
MSD 8056	M031231	15739	15739	11.03	11.1430	101.0%	99SS080	1.018	1	50	10/20/99	3.47
8056	M031231	15739	15739		1.0300			1.019	1	50	10/20/99	

Quality Control Sample Summary

SampleName	Report #	Associated Run ID	Run ID Number	Expected Value (mg/L)	ConcRead (mg/L)	Recovery %	Comment/ Source	Weight	Dilution	Extract Volume	Date Digested	RPD
CCB	M031231	15739	15739	0.15	-0.0070	ND			1	50		
CCV	M031231	15739	15739	10	9.3695	93.7%	99W1315		1	50		
CCV	M031231	15739	15739	10	9.4743	94.7%	99W1315		1	50		
CCB	M031231	15739	15739	0.15	-0.0065	ND			1	50		
CCV	M031231	15739	15739	10	9.4685	94.7%	99W1315		1	50		
DUP 8056	M031231	15739	15739	1.0312	1.0283	99.7%		1.03	1	50	10/20/99	1.24
PB 1494	M031231	15739	15739	0.3	-0.0100	ND			1	50	10/20/99	
LCS 1494	M031231	15739	15739	5	5.2731	105.5%	99SS080		1	50	10/20/99	
LCSD 1494	M031231	15739	15739	5	5.2423	104.8%	99SS080		1	50	10/20/99	0.59
MS 8074	M031231	15739	15739	43.90	43.5770	99.3%	99SS080	1.0007	1	50	10/20/99	
MSD 8074	M031231	15739	15739	43.89	43.7240	99.6%	99SS080	1.0004	1	50	10/20/99	0.37
8074	M031231	15739	15739		34.7000			1.0243	1	50	10/20/99	
CCB	M031231	15739	15739	0.15	0.0180	ND			1	50		
CCV	M031231	15739	15739	10	9.4505	94.5%	99W1315		1	50		
DUP 8074	M031231	15739	15739	34.671	35.0390	101.1%		1.0006	1	50	10/20/99	3.31
CCB	M031231	15739	15739	0.15	-0.0050	ND			1	50		
CCV	M031231	15739	15739	10	9.5634	95.6%	99W1315		1	50		
ICSAB	M031231	15739	15739	1	0.8101	81.0%	99W1350		1	50		
8056 PS	M031231	15739	15739	11.03	10.8000	97.9%	99SS080		1	50		
8074 PS	M031231	15739	15739	44.7	44.5000	99.6%	99SS080		1	50		
8074 SD	M031231	15739	15739	3.47	3.6900	106.3%	99SS080		10	50		
CCB	M031231	15739	15739	0.15	-0.0008	ND			1	50		
CCV	M031231	15739	15739	10	9.4378	94.4%	99W1315		1	50		
ICSAB	M031231	15739	15739	1	0.8147	81.5%	99W1350		1	50		
					Soil Re-analysis							
Calibration	QC Sample Run	10/29/99	10/29/99			r = 1.000000			1	50		
1 mg/L	QC Sample Run	10/29/99	10/29/99	1	EI = 283.9		99W1313		1	50		
10 mg/l	QC Sample Run	10/29/99	10/29/99	10	EI = 2837.2		99W1314		1	50		
CCB	QC Sample Run	10/29/99	10/29/99	0.15	0.0062	ND			1	50		
CCV	QC Sample Run	10/29/99	10/29/99	10	10.1582	101.6%	99W1315		1	50		
ICSAB	QC Sample Run	10/29/99	10/29/99	1	0.8785	87.8%	99W1350		1	50		
PB 1394	QC Sample Run	10/29/99	10/29/99	0.3	0.0047	ND			1	50	9/1/99	
BLCS 1394	QC Sample Run	10/29/99	10/29/99	10.7	11.6586	109.1%	99SS048	0.9729	1	50	9/1/99	
BLCSD 1394	QC Sample Run	10/29/99	10/29/99	10.8	10.9213	101.1%	99SS048	0.9843	1	50	9/1/99	7.69
MS 3997	QC Sample Run	15228	10/29/99	12.66	12.1560	96.0%	99SS080	0.9934	1	50	9/1/99	
MSD 3997	QC Sample Run	15228	10/29/99	12.71	12.1223	95.3%	99SS080	1.0141	1	50	9/1/99	2.34
CCB	QC Sample Run	10/29/99	10/29/99	0.15	0.0061	ND			1	50		
CCV	QC Sample Run	10/29/99	10/29/99	10	10.3356	103.4%	99W1315		1	50		
3997	QC Sample Run	15228	10/29/99		2.6997			1.0089	1	50	9/1/99	
DUP 3997	QC Sample Run	15228	10/29/99	2.6888	2.6948	100.2%		1.0048	1	50	9/1/99	0.22
CCB	QC Sample Run	10/29/99	10/29/99	0.15	-0.0051	ND			1	50		
CCV	QC Sample Run	10/29/99	10/29/99	10	10.1814	101.8%	99W1315		1	50		
4007	QC Sample Run	15228	10/29/99		11.3958				1	50	9/1/99	
PB 1396	QC Sample Run	10/29/99	10/29/99	0.3	0.0068	ND			1	50	9/1/99	
BLCS 1396	QC Sample Run	10/29/99	10/29/99	10.2	11.2737	110.5%	99SS048	0.929	1	50	9/1/99	
BLCSD 1396	QC Sample Run	10/29/99	10/29/99	10.8	11.0165	101.9%	99SS048	0.9843	1	50	9/1/99	8.09
MS 4012	QC Sample Run	15228	10/29/99	19.42	20.7505	106.8%	99SS080	1.0004	1	50	9/1/99	
MSD 4012	QC Sample Run	15228	10/29/99	19.47	20.8938	107.3%	99SS080	1.0054	1	50	9/1/99	0.19
4008	QC Sample Run	15228	10/29/99		10.6434				1	50	9/1/99	
CCB	QC Sample Run	10/29/99	10/29/99	0.15	0.0110	ND			1	50		
CCV	QC Sample Run	10/29/99	10/29/99	10	10.0836	100.8%	99W1315		1	50		

Quality Control Sample Summary

SampleName	Report #	Associated Run ID	Run ID Number	Expected Value (mg/L)	ConcRead (mg/L)	Recovery %	Comment/ Source	Weight	Dilution	Extract Volume	Date Digested	RPD
4012	QC Sample Run	15228	10/29/99		9.4406			1.0021	1	50	9/1/99	
DUP 4012	QC Sample Run	15228	10/29/99	9.6385	9.5854	99.4%		1.0231	1	50	9/1/99	0.55
CCB	QC Sample Run	10/29/99	10/29/99	0.15	0.0038	ND			1	50		
CCV	QC Sample Run	10/29/99	10/29/99	10	9.9705	99.7%	99W1315		1	50		
4020	QC Sample Run	15229	10/29/99		13.3529			1.0577	1	50	9/1/99	
DUP 4020	QC Sample Run	15229	10/29/99	12.9665	14.0961	108.7%		1.0271	1	50	9/1/99	8.35
MS 4020	QC Sample Run	15229	10/29/99	23.15	25.9006	111.9%	99SS080	1.0418	1	50	9/1/99	
MSD 4020	QC Sample Run	15229	10/29/99	23.15	21.1511	91.4%	99SS080	1.0416	1	50	9/1/99	20.17
PS 4007	QC Sample Run	15228	10/29/99	21.3958	20.9760	98.0%	99SS080		1	50		
SD 4007	QC Sample Run	15228	10/29/99	2.2792	2.2995	100.9%			5	50		
CCB	QC Sample Run	10/29/99	10/29/99	0.15	0.0091	ND			1	50		
CCV	QC Sample Run	10/29/99	10/29/99	10	9.8316	98.3%	99W1315		1	50		
PS 4008	QC Sample Run	15228	10/29/99	12.6434	12.6739	100.2%	99SS080		1	50		
SD 4008	QC Sample Run	15228	10/29/99	2.1287	0.6790	31.9%	Other OK for this batch		5	50		
CCB	QC Sample Run	10/29/99	10/29/99	0.15	0.0090	ND			1	50		
CCV	QC Sample Run	10/29/99	10/29/99	10	9.8281	98.3%	99W1315		1	50		
ICSAB	QC Sample Run	10/29/99	10/29/99	1	0.8519	85.2%	99W1350		1	50		
PB 1508	QC Sample Run	10/29/99	10/29/99	0.3	0.0059	ND			1	50	10/29/99	
LCS 1508	QC Sample Run	10/29/99	10/29/99	5	5.3330	106.7%	99SS080		1	50	10/29/99	
LCSD 1508	QC Sample Run	10/29/99	10/29/99	5	5.3308	106.6%	99SS080		1	50	10/29/99	0.04
MS 2287	QC Sample Run	1	10/29/99	22.01	24.1893	109.9%	99SS080	1.0032	1	50	10/29/99	
MSD 2287	QC Sample Run	1	10/29/99	22.01	24.4206	111.0%	99SS080	1.003	1	50	10/29/99	0.97
2287	QC Sample Run	1	10/29/99		VOID	See Rerun		1.0526	1	50	10/29/99	
DUP 2287	QC Sample Run	1	10/29/99		VOID	See Rerun		1.0715	1	50	10/29/99	
DUP 1705	QC Sample Run	14875	10/29/99	22.1024	VOID	See Rerun		2.0306	1	50	10/29/99	
DUP 2699	QC Sample Run	5	10/29/99	20.0023	VOID	See Rerun		1.0033	1	50	10/29/99	
CCB	QC Sample Run	10/29/99	10/29/99	0.15	0.0057	ND			1	50		
CCV	QC Sample Run	10/29/99	10/29/99	10	10.0786	100.8%	99W1315		1	50		
DUP 4211	QC Sample Run	15302	10/29/99	8.4005	8.4187	100.2%		1.0011	1	50	10/29/99	0.22
DUP 4515	QC Sample Run	15302	10/29/99	2.7967	2.6879	96.1%		1.0029	1	50	10/29/99	3.96
DUP 5370	QC Sample Run	15395	10/29/99	13.2155	13.2503	100.3%		1.02	1	50	10/29/99	0.26
SD 2287	QC Sample Run	1	10/29/99	2.5200	2.9063	115.3%			5	50		
PS 2287	QC Sample Run	1	10/29/99	22.5999	23.1146	102.3%	99SS080		1	50		
SD 1749	QC Sample Run	14875	10/29/99	VOID	VOID	See Rerun			5	50		
PS 1705	QC Sample Run	14875	10/29/99	VOID	VOID	See Rerun	99SS080		1	50		
SD 1749	QC Sample Run	14875	10/29/99	3.3660	3.0992	92.1%			5	50		
PS 1705	QC Sample Run	14875	10/29/99	31.7900	27.4394	86.3%	99SS080		1	50		
PS 2711	QC Sample Run	5	10/29/99	19.3300	19.0910	98.8%	99SS080		1	50		
SD 2711	QC Sample Run	5	10/29/99	1.8660	1.9303	103.4%			5	50		
PS 4216	QC Sample Run	15302	10/29/99	19.6506	19.6312	99.9%	99SS080		1	50		
CCB	QC Sample Run	10/29/99	10/29/99	0.15	0.0116	ND			1	50		
CCV	QC Sample Run	10/29/99	10/29/99	10	10.0961	101.0%	99W1315		1	50		
ICSAB	QC Sample Run	10/29/99	10/29/99	1	0.8943	89.4%	99W1350		1	50		
SD 4216	QC Sample Run	15302	10/29/99	1.930120087	2.0989	108.7%			5	50		
PS 4856	QC Sample Run	15359	10/29/99	19.3281002	19.2742	99.7%	99SS080		1	50		
SD 4856	QC Sample Run	15359	10/29/99	1.865620041	1.9377	103.9%			5	50		
PS 5370	QC Sample Run	15395	10/29/99	23.2	23.7441	102.3%	99SS080		1	50		
SD 5370	QC Sample Run	15395	10/29/99	2.64	2.9203	110.6%			5	50		
PS 5667	QC Sample Run	15421	10/29/99	21.1	20.8985	99.0%	99SS080		1	50		
SD 5667	QC Sample Run	15421	10/29/99	2.22	2.3295	104.9%			5	50		
PS 6206	QC Sample Run	15481	10/29/99	19.41619968	19.6859	101.4%	99SS080		1	50		
SD 6206	QC Sample Run	15481	10/29/99	1.883239937	2.0125	106.9%			5	50		

Table 1
Quality Control Sample Summary

SampleName	Report #	Associated Run ID	Run ID Number	Expected Value (mg/L)	ConcRead (mg/L)	Recovery %	Comment/ Source	Weight	Dilution	Extract Volume	Date Digested	RPD
PS 6323	QC Sample Run	15505	10/29/99	16.25	16.6565	102.5%	99SS080		1	50		
CCB	QC Sample Run	10/29/99	10/29/99	0.15	0.0078	ND			1	50		
CCV	QC Sample Run	10/29/99	10/29/99	10	10.1010	101.0%	99W1315		1	50		
SD 6323	QC Sample Run	15505	10/29/99	1.25	1.3603	108.8%			5	50		
PS 6543	QC Sample Run	15551	10/29/99	25.35	25.4267	100.3%	99SS080		1	50		
SD 6543	QC Sample Run	15551	10/29/99	3.07	3.1837	103.7%			5	50		
PS 6740	QC Sample Run	15560	10/29/99	20.871	21.4862	102.9%	99SS080		1	50		
SD 6740	QC Sample Run	15560	10/29/99	2.1742	2.2397	103.0%			5	50		
PS 7282	QC Sample Run	15624	10/29/99	17.7900	19.7470	111.0%	99SS080		1	50		
SD 7282	QC Sample Run	15624	10/29/99	1.558	2.0086	128.9%			5	50		
PS 7590	QC Sample Run	15670	10/29/99	19.6795	18.6149	94.6%	99SS080		1	50		
SD 7590	QC Sample Run	15670	10/29/99	1.9359	1.9135	98.8%			5	50		
PS 7853	QC Sample Run	15701	10/29/99	24.064	23.8128	99.0%	99SS080		1	50		
CCB	QC Sample Run	10/29/99	10/29/99	0.15	0.0084	ND			1	50		
CCV	QC Sample Run	10/29/99	10/29/99	10	9.9517	99.5%	99W1315		1	50		
SD 7853	QC Sample Run	15701	10/29/99	2.8128	3.0540	108.6%			5	50		
CCB	QC Sample Run	10/29/99	10/29/99	0.15	0.0079	ND			1	50		
CCV	QC Sample Run	10/29/99	10/29/99	10	9.9874	99.9%	99W1315		1	50		
ICSAB	QC Sample Run	10/29/99	10/29/99	1	0.8739	87.4%	99W1350		1	50		
						TCLP						
SampleName		Associated Run ID	Run ID Number	Expected Value (mg/L)	ConcRead (mg/L)	Recovery %	Comment/ Source	Date Extracted	Dilution	Extract Volume	Date Digested	RPD
Calibration	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP			r = 0.999925						
1 mg/L	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	1	EI = 190278		99W1290	8/1/99				
5 mg/l	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	5	EI = 826760		99W1227	8/1/99	1	25		
25 mg/l	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	25	EI = 4295509		99W1228	8/1/99	1	25		
CCB	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	0.15	-0.0707	ND		8/1/99	1	25		
CCV	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	5	4.7960	95.9%	99W1291	8/1/99	1	25		
ICSAB	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	1	1.0680	106.8%	99W1265	8/1/99	1	25		
CCV	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	5	4.7700	95.4%	99W1291	8/1/99	1	25		
CCB	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	0.15	0.0307	ND		8/1/99	1	25		
CCV	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	5	4.8460	96.9%	99W1291	8/1/99	1	25		
CCB	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	0.15	0.0496	ND		8/1/99	1	25		
PB 3302	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	0.3	0.0856	ND		8/1/99	1	25	8/2/99	
LCS 3302	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	5	4.9500	99.0%	99SS080	8/1/99	1	25	8/2/99	
LCSD 3302	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	5	4.7300	94.6%	99SS080	8/1/99	1	25	8/2/99	4.55
MS 1746	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	10.0507	9.3310	92.8%	99SS080	8/1/99	1	25	8/2/99	

Table 1
Quality Control Sample Summary

SampleName	Report #	Associated Run ID	Run ID Number	Expected Value (mg/L)	ConcRead (mg/L)	Recovery %	Comment/ Source	Weight	Dilution	Extract Volume	Date Digested	RPD
MSD 1746	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	10.0507	9.2460	92.0%	99SS080	8/1/99	1	25	8/2/99	0.92
CCV	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	5	4.7080	94.2%	99W1291	8/1/99	1	25		
CCB	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	0.15	0.1059	ND		8/1/99	1	25		
CCB	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	0.15	0.0225	ND		8/1/99	1	25		
1746	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP		0.0507			8/1/99	1	25	8/2/99	
CCB	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	0.15	0.0639	ND		8/1/99	1	25		
ICSAB	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	1	1.0420	104.2%	99W1265	8/1/99	1	25		
CCV	MO29775, MO29776, MO29779, MO29780, MO29782, M029783, MO29784, MO29785, MO29786, MO29787, MO29788, MO29789, MO29790, MO29791	14887 TCLP	14887 TCLP	5	4.5860	91.7%	99W1291	8/1/99	1	25		
						TCLP						
Calibration	MO29941	1 TCLP	1 TCLP			r = 1.000000		8/16/99	1	25		
1 mg/L	MO29941	1 TCLP	1 TCLP	1	EI = 471.3		99W1290	8/16/99	1	25		
10 mg/L	MO29941	1 TCLP	1 TCLP	10	EI = 4706		99W1314	8/16/99	1	25		
CCB	MO29941	1 TCLP	1 TCLP	0.15	0.0354	ND		8/16/99	1	25		
CCV	MO29941	1 TCLP	1 TCLP	10	9.8800	98.8%	99W1284	8/16/99	1	25		
ICSAB	MO29941	1 TCLP	1 TCLP	1	0.9590	95.9%	99W1265	8/16/99	1	25		
PB 3330	MO29941	1 TCLP	1 TCLP	0.3	-0.0286	ND		8/16/99	1	25	8/17/99	
LCS 3330	MO29941	1 TCLP	1 TCLP	5	4.6300	92.6%	99SS080	8/16/99	1	25	8/17/99	
LCSD 3330	MO29941	1 TCLP	1 TCLP	5	4.6100	92.2%	99SS080	8/16/99	1	25	8/17/99	0.43
MS 1737	MO29941	1 TCLP	1 TCLP	13.4000	12.3000	91.8%	99SS080	8/16/99	1	25	8/17/99	
MSD 1737	MO29941	1 TCLP	1 TCLP	13.4000	12.2000	91.0%	99SS080	8/16/99	1	25	8/17/99	0.82
1737	MO29941	1 TCLP	1 TCLP		3.4000			8/16/99	1	25	8/17/99	
CCB	MO29941	1 TCLP	1 TCLP	0.15	-0.0401	ND		8/16/99	1	25		
CCV	MO29941	1 TCLP	1 TCLP	10	9.8400	98.4%	99W1284	8/16/99	1	25		
ICSAB	MO29941	1 TCLP	1 TCLP	1	0.9350	93.5%	99W1265	8/16/99	1	25		
						TCLP						
Calibration	M030046, M030047	7 TCLP	7 TCLP			r = 1.000000		8/20/99	1	25		
1 mg/L	M030046, M030047	7 TCLP	7 TCLP	1	EI = 464.9		99W1290	8/20/99	1	25		
10 mg/L	M030046, M030047	7 TCLP	7 TCLP	10	EI = 4409.4		99W1314	8/20/99	1	25		
CCB	M030046, M030047	7 TCLP	7 TCLP	0.15	0.0074	ND		8/20/99	1	25		
CCV	M030046, M030047	7 TCLP	7 TCLP	10	10.0020	100.0%	99W1284	8/20/99	1	25		
ICSAB	M030046, M030047	7 TCLP	7 TCLP	1	0.9535	95.4%	99W1265	8/20/99	1	25		
CCB	M030046, M030047	7 TCLP	7 TCLP	0.15	0.0176	ND		8/20/99	1	25		
CCV	M030046, M030047	7 TCLP	7 TCLP	10	10.1650	101.7%	99W1284	8/20/99	1	25		
PB 3338	M030046, M030047	7 TCLP	7 TCLP	0.3	-0.0191	ND		8/20/99	1	25	8/22/99	
LCS 3338	M030046, M030047	7 TCLP	7 TCLP	5	4.6000	92.0%	99SS080	8/20/99	1	25	8/22/99	
CCB	M030046, M030047	7 TCLP	7 TCLP	0.15	-0.0152	ND		8/20/99	1	25	8/22/99	
CCV	M030046, M030047	7 TCLP	7 TCLP	10	10.0320	100.3%	99W1284	8/20/99	1	25	8/22/99	
LCSD 3338	M030046, M030047	7 TCLP	7 TCLP	5	4.5600	91.2%	99SS080	8/20/99	1	25	8/22/99	0.87
MS 2701	M030046, M030047	7 TCLP	7 TCLP	11.7300	10.6000	90.4%	99SS080	8/20/99	1	25	8/22/99	
MSD 2701	M030046, M030047	7 TCLP	7 TCLP	11.7300	10.6000	90.4%	99SS080	8/20/99	1	25	8/22/99	0.00
2701	M030046, M030047	7 TCLP	7 TCLP		1.7300			8/20/99	1	25	8/22/99	
CCB	M030046, M030047	7 TCLP	7 TCLP	0.15	-0.0197	ND		8/20/99	1	25		
CCV	M030046, M030047	7 TCLP	7 TCLP	10	9.9030	99.0%	99W1284	8/20/99	1	25		
ICSAB	M030046, M030047	7 TCLP	7 TCLP	1	0.9742	97.4%	99W1265	8/20/99	1	25		

Quality Control Sample Summary

SampleName	Report #	Associated Run ID	Run ID Number	Expected Value (mg/L)	ConcRead (mg/L)	Recovery %	Comment/ Source	Weight	Dilution	Extract Volume	Date Digested	RPD
					Soil/TCLP Reruns							
SampleName		Associated Run ID	Run ID Number	Expected Value (mg/L)	ConcRead (mg/L)	Recovery %	Comment/ Source	Weight	Dilution	Extract Volume	Date Digested	RPD
Calibration	Reruns	15907	15907			R = 1.000000			1	50		
1 mg/L	Reruns	15907	15907	1	EI = 267.9		99W1347		1	50		
10 mg/l	Reruns	15907	15907	10	EI = 2643.8		99W1348		1	50		
ICSAB	Reruns	15907	15907	1	0.8438	84.4%	99W1265		1	50		
CCV	Reruns	15907	15907	10	10.0089	100.1%	99W1349		1	50		
CCB	Reruns	15907	15907	0.15	0.0016	ND			1	50		
CCB	Reruns	15907	15907	0.15	-0.0029	ND			1	50		
CCV	Reruns	15907	15907	10	9.9491	99.5%	99W1349		1	50		
ICSAB	Reruns	15907	15907	1	0.8547	85.5%			1	50		
2287	Reruns	1	15907		12.5999			1.0526	1	50	10/29/99	
DUP 2287	Reruns	1	15907	12.8261	12.4661	97.2%		1.0715	1	50	10/29/99	2.85
DUP 1705	Reruns	14875	15907	22.1024	17.5828	79.6%		2.0306	1	50	10/29/99	22.78
DUP 2699	Reruns	5	15907	20.0023	20.2848	101.4%		1.0033	1	50	10/29/99	1.40
PS 1707	Reruns	15907	15907	14.6000	13.5137	92.6%	99SS080		1	25		
SD 1707	Reruns	15907	15907	0.7667	0.7488	97.7%			6	25		
PS 1724	Reruns	15907	15907	15.4000	14.1829	92.1%	99SS080		1	25		
SD 1724	Reruns	15907	15907	1.3500	1.4062	104.2%			4	25		
PS 2701	Reruns	1	15907	11.7000	11.6287	99.4%	99SS080		1	25		
SD 2701	Reruns	1	15907	0.3400	0.3599	105.8%			5	25		
CCB	Reruns	15907	15907	0.15	0.0021	ND			1	50		
CCV	Reruns	15907	15907	10	9.8766	98.8%	99W1349		1	50		
ICSAB	Reruns	15907	15907	1	0.8373	83.7%	99W1265		1	50		
					QAP Requirements							
					Rec. Limits	RPD Limits						
				LCS/LCSD Limit	80-120							
				MS/MSD limit	75-125	35						
				Duplicate		35						
				Serial Dilution	90-110							
				Prep Blank	<RDL							
				CCB	<1/2 RDL							
				CCV	90-110							
				Post Spike	75-125							
				ICSAB	80-120							
					ICP Conditions							
ICP Analytical Wavelength: Wavelength 220.353 used for all ICP analysis.												
ICP Linear Range: 25 mg/L upper linear range last established 7/19/99												
ICP Interelement Correction Factors: No IEC's were necessary for Pb analysis.												

TABLE 2

RESULTS FOR FIELD DUPLICATE PAIRS

Primary Sample	Primary Concentration (mg/Kg)	Duplicate Sample	Duplicate Concentration (mg/Kg)	%RPD (or absolute difference)*	Within Control? (Y/N)
D-030-03	180	D-030-04	200	11%	Y
D-046-07	700	D-046-08	810	15%	Y
D-046-17	640	D-046-18	480	29%	Y
D-061-19	980	D-061-21	970	1%	Y

* When the reported concentrations are less than five times the 50 mg/kg reporting limit, the difference between the detected values is calculated rather than the RPD.

TABLE 3
Duplicate USEPA Sample Results
EPA REGION 9 LABORATORY-RICHMOND, CA
SUMMARY OF ANALYTICAL RESULTS

Case Number: R99S45
Site: VERDESE CARTER PARK
SDG: 99245B
Date: 09/13/99

Analysis: Lead
Matrix: Soil

Sample No.	N/A		N/A		N/A		N/A		N/A		N/A
Sample I.D.	EPA-D030-01		EPA-D030-02		EPA-D030-03		EPA-D030-04		Reagent Blank		Quant. Limit
Lab Sample I.D.	AB23784		AB23785		AB23786		AB23787		N/A		N/A
Date of Collection	09/01/99		09/01/99		09/01/99		09/01/99		N/A		N/A
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg
Analyte	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result
Lead	447	*	378	*	448	*	782	*	10	U	30
%Solids	98		94		95		94		N/A		N/A

Q - Laboratory Data Qualifiers, Refer to EPA Region 9 Laboratory Qualifier Definitions
All results are in mg/Kg dry weight.

TABLE 3
Duplicate USEPA Sample Results
EPA REGION 9 LABORATORY-RICHMOND, CA
SUMMARY OF ANALYTICAL RESULTS

Case Number: R99S45
Site: VERDESE CARTER PARK
SDG: 99217C
Date: 08/13/99

Analysis: Lead
Matrix: Soil

Sample No.	42D-01		42D-09		N/A		N/A
Sample I.D.	EPA-42D-01		EPA-42D-02		Reagent Blank		Quant. Limit
Lab Sample I.D.	AB23319		AB23320		N/A		N/A
Date of Collection	07/30/99		07/30/99		N/A		N/A
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg
Analyte	Result	Q	Result	Q	Result	Q	Result
Lead	384	N*	215	N*	10.0	U	30.0
% Solids	80		94		N/A		N/A

Q - Laboratory Data Qualifiers; Refer to EPA Region 9 Laboratory Qualifier Definitions
Samples reported as mg/Kg dry weight.

TABLE 3
Duplicate USEPA Sample Results
EPA REGION 9 LABORATORY-RICHMOND, CA
SUMMARY OF ANALYTICAL RESULTS

Case Number: R99S45
Site: VERDESE CARTER PARK
SDG: 99225A
Date: 08/23/99

Analysis: Lead
Matrix: Soil

Street Address	N/A		N/A		N/A		N/A		N/A		N/A
Sample No.	46D-01		46D-03		46D-13		46D-16		N/A		N/A
Sample I.D.	EPA-46D-01		EPA-46D-03		EPA-46D-13		EPA-46D-16		Reagent Blank		Quant. Limit
Lab Sample I.D.	AB23534		AB23535		AB23536		AB23537		N/A		N/A
Date of Collection	08/13/99		08/13/99		08/13/99		08/13/99		N/A		N/A
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg
Analyte	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result
Lead	860	*	1000	*	770	*	770	*	10		30
%Solids	94		95		97		94		N/A		N/A

Q - Laboratory Data Qualifiers, Refer to EPA Region 9 Laboratory Qualifier Definitions
All results are in mg/Kg dry weight.

TABLE 3
Duplicate USEPA Sample Results
EPA REGION 9 LABORATORY-RICHMOND, CA
SUMMARY OF ANALYTICAL RESULTS

Case Number: R99S45
Site: VERDESE CARTER PARK
SDG: 99267A
Date: 09/28/99

Analysis: Lead
Matrix: Soil

Sample No.	N/A		N/A		N/A		N/A		N/A		N/A		N/A
Sample I.D.	EPA-D061-01		EPA-D061-02		EPA-D061-03		EPA-D061-04		EPA-D061-05		Reagent Blank		Quant. Limit
Lab Sample I.D.	AB24212		AB24213		AB24214		AB234215		AB234216		N/A		N/A
Date of Collection	09/24/99		09/24/99		09/24/99		09/24/99		09/24/99		N/A		N/A
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg
Analyte	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result
Lead	770		950		390		740		440		10	U	30
%Solids	94		91		95		91		91		N/A		N/A

Q - Laboratory Data Qualifiers, Refer to EPA Region 9 Laboratory Qualifier Definitions
All results are in mg/Kg dry weight.

TABLE 4
Comparison of USEPA Results With Laboratory Results
Verdese Carter Park Project Phase 3 - Supplemental Samples
AlliedSignal, Inc.

Parsons ES Sample ID	EPA Sample ID	Date Collected	Lab Result (EPA Method 6010) (mg/kg, dry weight)	Reported EPA Result (mg/kg, dry weight)	Relative Percent Difference
D-030-01	EPA-D030-01	9/1/99	460	447	3%
D-030-05	EPA-D030-02	9/1/99	390	378	3%
D-030-06	EPA-D030-03	9/1/99	530	448	17%
D-030-07	EPA-D030-04	9/1/99	800	782	2%
D-042-01	EPA-42D-01	7/30/99	180	384	72%
D-042-09	EPA-42D-02	7/30/99	350	215	48%
D-046-01	EPA-46D-01	8/13/99	1800	860	71%
D-046-03	EPA-46D-03	8/13/99	1100	1000	10%
D-046-13	EPA-46D-13	8/13/99	670	770	14%
D-046-16	EPA-46D-16	8/13/99	820	770	6%
D-061-15	EPA-D061-01	9/24/99	800	770	4%
D-061-13	EPA-D061-02	9/24/99	1300	950	31%
D-061-20	EPA-D061-03	9/24/99	430	390	10%
D-061-18	EPA-D061-04	9/24/99	740	740	0%
D-061-22	EPA-D061-05	9/24/99	410	440	7%

mg/kg = milligrams per kilogram, approximately equal to parts per million (ppm)

Relative Percent Difference (%) = ([L-X]/[[L+X]/2])*100, where L = lab result and X = EPA reported result